Base Load Power Hub (BLPH)

AC UPS - WIRING DIAGRAM & TERMINAL SCHEDULE INCLUDING EQUIPMENTS LIST & BILL OF MATERIAL

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03	03/10/2024	As-Built	DA	DA	AD
02	01/10/2024	Accepted for Construction (AFC)	DA	DA	AD
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Rev.	Date	Description	Prepared	Reviewed	Approved

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Revision / Change Log

Rev.	Description
00	Issue for Review (IFR)
01	Accepted for Construction (AFC)
02	Accepted for Construction (AFC)
03	As-Built

HOLDS LIST

No.	Description
1	
2	
3	
4	

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Base Load Power Hub (BLPH)

AC UPS PAS - TAG: UP-200F3
WIRING DIAGRAM & TERMINAL SCHEDULE

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CAE EPLAN Electric P8

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AEG

POWER SOLUTIONS

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www.aegps.com

Project name	1000007888_010
Customer	ROSETTI MARINO
Key word	Hollandse Kust Noord (HKN) wind farm

System	AC UPS PAS - TAG: UP-200F3
Systems Type	System 40 kVA
Responsible for project	Ch.Peck

Created on	23.05.2024	from	Beckschäfer
Last Revision	27.08.2024	from	Beckschäfer

Number of pages 153

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02	500000002089	27.08.2024	Beckschäfer	Checked	Ch.Peck
Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

System 40 kVA

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	UPS2	17	Terminal diagram	Terminal diagram =+UPS2-F121	Beckschäfer			
	UPS2	18	Terminal diagram	Terminal diagram =+UPS2-PE	Beckschäfer			
	UPS2	19	Terminal diagram	Terminal diagram =+UPS2-X12	Beckschäfer			
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Structure identifier overview

Full designation	Labeling	Structure description
+BAT1	Installation location	Battery cabinet
+MBC1	Installation location	Bypass transformer cabinet with manual bypass 40 kVA
+UPS1	Installation location	Protect 8.33 40-400-210-400
+UPS2	Installation location	Protect 8.33 40-400-210-400
&EAA	Document type	Title page/Cover page
&EAB	Document type	Table of contents
&EDB	Document type	Structure identifier overview
&EFA	Document type	Single-line diagram
&EFS	Document type	Circuit diagram
&EMA	Document type	Terminal diagram

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AUXILIARY
From Lighting & Small Power DB BOP DP-200N1
(Cubicle 03-Q41)
100-240V/N/PE~50/60Hz
back-up fuse gG10A 3G2.5mm2

LINE A
From LV Switchgear SG-200N1
(Cubicle A3/01)
Mains 400V;3/PE~50Hz
gG80A 4G35mm2

From LV Switchgear SG-200N1
(Cubicle A7/02)
Bypass mains 400V;3/PE~50Hz
gG63A 4G35mm2

LINE B
From LV Switchgear SG-200N1
(Cubicle A4/01)
Mains 400V;3/PE~50Hz
gG80A 4G35mm2

Not included in the AEG shipment

Code	Description
Q1	Rectifier input mains breaker
T40	Rectifier input isolation transformer
A1	Rectifier
A2	Inverter
T1	Inverter output isolation transformer
A3-A4	Static by-pass switch
A18	Display control module
A85	Heater
H1	Light

+MBC1
BY-200F3
Bypass transformer cabinet 40 kVA
100000788B.020
10009757

-X1 1U,1V,1W,PE
-X10 U,V,W,PE
-X13 U,N,PE
-X14 U,N
-X1 3U,3V,3W,PE
-Q10 L=80/85A I=0,8kA Icu=50kA
-A85
-H1
-T8 400V/400V 40kVA
-Q28.1 NC
-Q28.2 NC
-X1 2U,2V,2W,PE
-X4 1U,1V,1W,1N,PE
-X4 2U,2V,2W,2N,PE
-X1 4U,4V,4W,PE

+UPS1
BC-200F3A
Protect 8.33 40-400-210-400
100000788B.010
10009756

+UPS2
BC-200F3B
Protect 8.33 40-400-210-400
100000788B.010
10009756

-E1-X1 U,V,W,PE
-E4-X4 U,V,W,N,PE
-Q1 L=100/85A I=1,0kA Icu=50kA
-T40
-A1 REC
-A2 INV
-T1
-F1,-F2,-F3
-A3 SBS
-A4
-A18 Display
-A20 Parallel Adapter
INV CAN -X3 1-3 → 203 / 1.6
INV Sync -X5 1-4 → 205 / 1.6
1.5 / 203 → -X3 1-3 INV CAN
1.5 / 205 → -X5 1-4 INV Sync
-L11,-L12,-L13 Parallel preventive choke coil
-A24.1 BLÜ-PRO
-F91
-A12 ,-A13 Remote signaling
-E2-X2 L-,L+,PE
-X15 2,3
-X130 1,2
-E3-X3 U,V,W,N,PE

*2

-X2 1L+,1L-,PE
-X15 2,3
-X91 1M
-X5 1U,1V,1W,1N,PE
-X5 2U,2V,2W,2N,PE
-X2 3L+,3L-,PE
-X15 6,7
-X91 3M
-Q71 NC
-Q72 NC
A / 1.6
1.5 / A
-Q29 INV operation Manual bypass
-F25
DP-200F3
-QF31 B32A 300mA
-QF32 B32A ^^0mA
-QF33 B32A 300mA
-QF34 B16A 300mA
5pc
-QF38 B16A 300mA
-QF39 B10A 300mA
4pc
-QF42 B10A 300mA
-QF43 B10A
8pc
-QF50 B10A
-QF51 B6A
-QF52 B6A
-X2 2L+,2L-,PE
-X15 4,5
-X91 2M
-X130 1,2,1PE
-X31 U,N,PE
-X32 U,N,PE
-X33 U,N,PE
-X34 U,N,PE
-X38 V,N,PE
-X39 V,N,PE
-X42 W,N,PE
-X43 W,N,PE
-X50 U,N,PE
-X51 V,N,PE
-X52 V,N,PE
-X2 4L+,4L-,PE
-X15 8,9
-X91 4M
-X130 3,4,2PE

2(1x70 mm2)

+BFB1
CB-200F3A
Battery fuse box 200 A
*1
-Q2 L=200A
DC 24V max. 300W

+BFB2
CB-200F3B
Battery fuse box 200 A
*1
-Q2 L=200A
DC 24V max. 300W

Not included in the AEG shipment
max. gG16A
max. gG16A
Load
400/230V;3/N/PE~50Hz

+BAT1
BA-200F3A
Batteries installed on rack
18 x FLG 12-150
Battery voltage 216V
Battery capacity 150Ah
string 1
-R81

+BAT2
BA-200F3B
Batteries installed on rack
18 x FLG 12-150
Battery voltage 216V
Battery capacity 150Ah
string 1
-R81

*1 Attention! In the event of battery undervoltage < 130 V, the UPS automatically switches off battery isolator Q2.
If this happens, switch X15:3 must be switched into the open position (undervoltage trip blocked).
For restart, please refer to the chapter in the UPS operating instructions (charging the DC link capacitors) attached.
Unlock the tripped switch Q2 by switching to open position.
After charging the DC link capacitors, switch on Q2.
Attention! When the battery voltage reaches > 200 V, switch X15:3 must be switched back to the closed position.

*2 Connection cables are not included.

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REC mains

UPS1

Top entry

-X1 1U 1V 1W

-PE

PE busbar

Cu 40x5 mm

Door

GNYE 6 mm²

Rack

Rack

BK R16 mm²

BK R16 mm²

BK R16 mm²

GNYE R35 mm²

Bottom entry

-PE

Cu 40x5 mm

-X1 2U 2V 2W

+UPS1

Protect 8.33 40-400-210-400

1000007888.010

10009756

GZ1_1 +UPS1/1.2

GZ1_2 +UPS1/1.2

GZ1_3 +UPS1/1.2

REC mains

UPS2

Top entry

-X1 3U 3V 3W

-PE

BK R16 mm²

BK R16 mm²

BK R16 mm²

Bottom entry

-PE

-X1 4U 4V 4W

+UPS2

Protect 8.33 40-400-210-400

1000007888.010

10009756

GZ1_1 +UPS2/1.2

GZ1_2 +UPS2/1.2

GZ1_3 +UPS2/1.2

1000007888_010

			Date	22.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm
			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

REC mains
Bypass transformer cabinet
with manual bypass 40 kVA
Circuit diagram

1000007888.020
10009757

1000007888_010 en

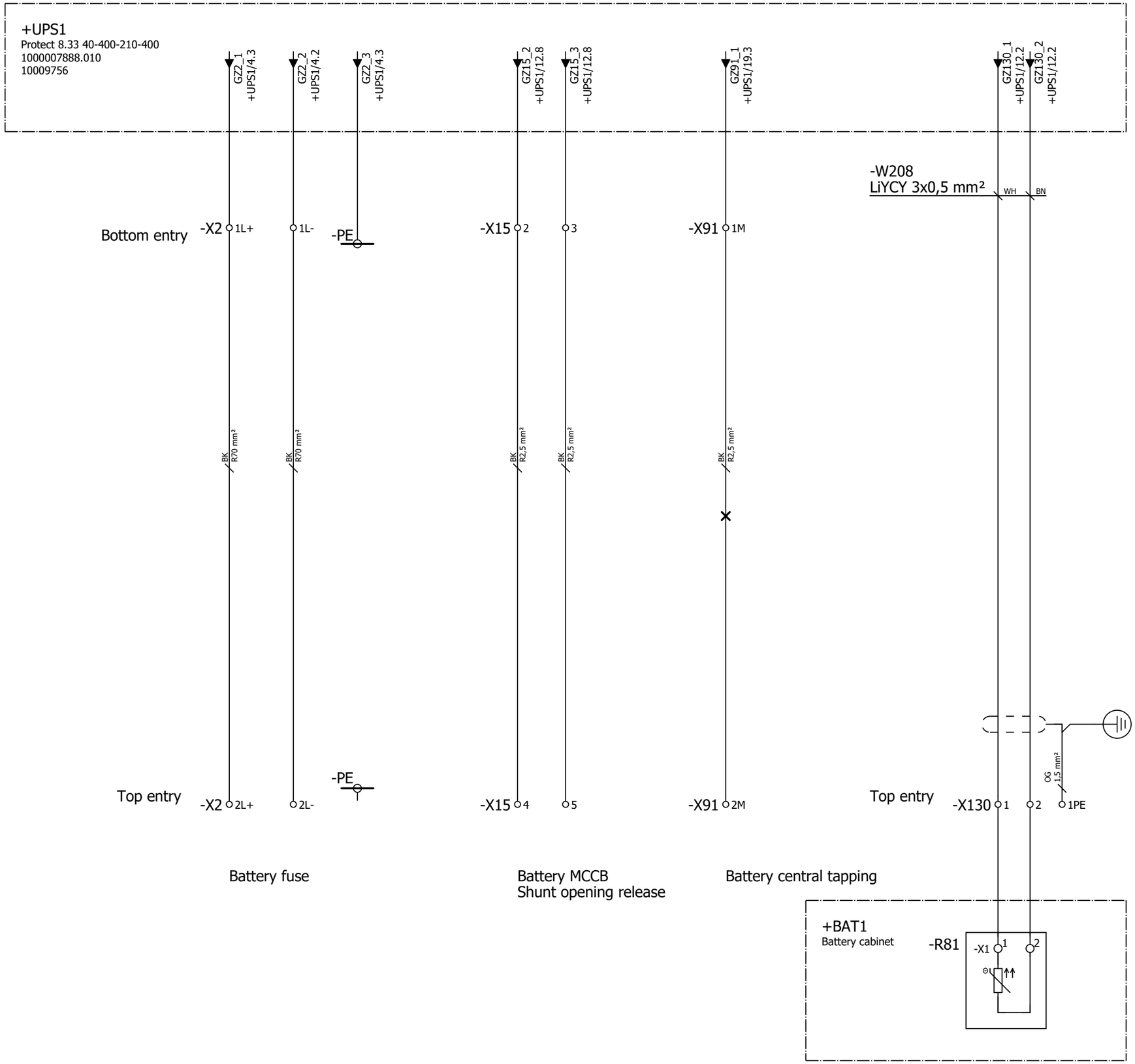
=
+ MBC1
& EFS

A3

sheet 1
sheets 17

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1000007888_010

				Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	GR-Ausgang UPS1 Bypass transformer cabinet with manual bypass 40 kVA Circuit diagram		=	
				Editor	Beckschäfer					+ MBC1	
				Checked	Ch.Peck				1000007888.020 10009757	& EFS	A3 sheet 2
Stat	Alteration	Date	Name	Norm					1000007888_010 en		sheets 17

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+UPS2
Protect 8.33 40-400-210-400
1000007888.010
10009756

GZ2_1 +UPS2/4.3
GZ2_2 +UPS2/4.2
GZ2_3 +UPS2/4.3
GZ15_2 +UPS2/12.8
GZ15_3 +UPS2/12.8
GZ91_1 +UPS2/19.3
GZ130_1
GZ130_2

-W209
LiYCY 3x0,5 mm²
WH
BN

Bottom entry
-X2 3L+
3L-
-PE
-X15 6
7
-X91 3M

BK R70 mm²
BK R70 mm²
BK R2,5 mm²
BK R2,5 mm²
BK R2,5 mm²

Top entry
-X2 4L+
4L-
-PE
-X15 8
9
-X91 4M

Battery fuse

Battery MCCB
Shunt opening release

Battery central tapping

Top entry
-X130 3
4
2PE
OG 1,5 mm²

+BAT2
Battery cabinet
-R81
-X1 1
2

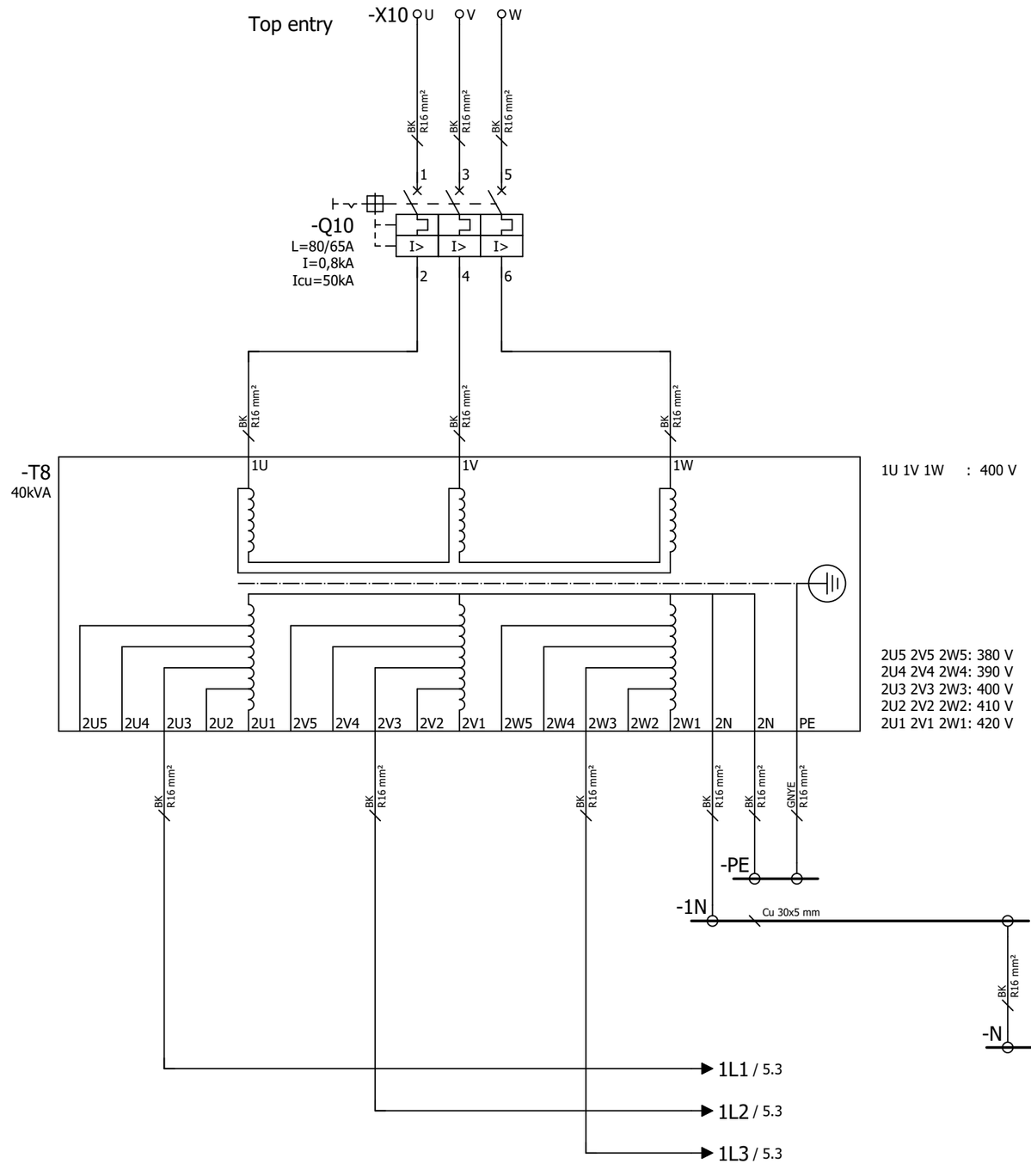
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				Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	GR-Ausgang UPS2 Bypass transformer cabinet with manual bypass 40 kVA Circuit diagram		=	
				Editor	Beckschäfer					+ MBC1	
				Checked	Ch.Peck				1000007888.020 10009757	& EFS	A3 sheet 3
Stat	Alteration	Date	Name	Norm					1000007888_010 en		sheets 17

CAE EPLAN Electric P8

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Mains
400V;3/PE~50Hz

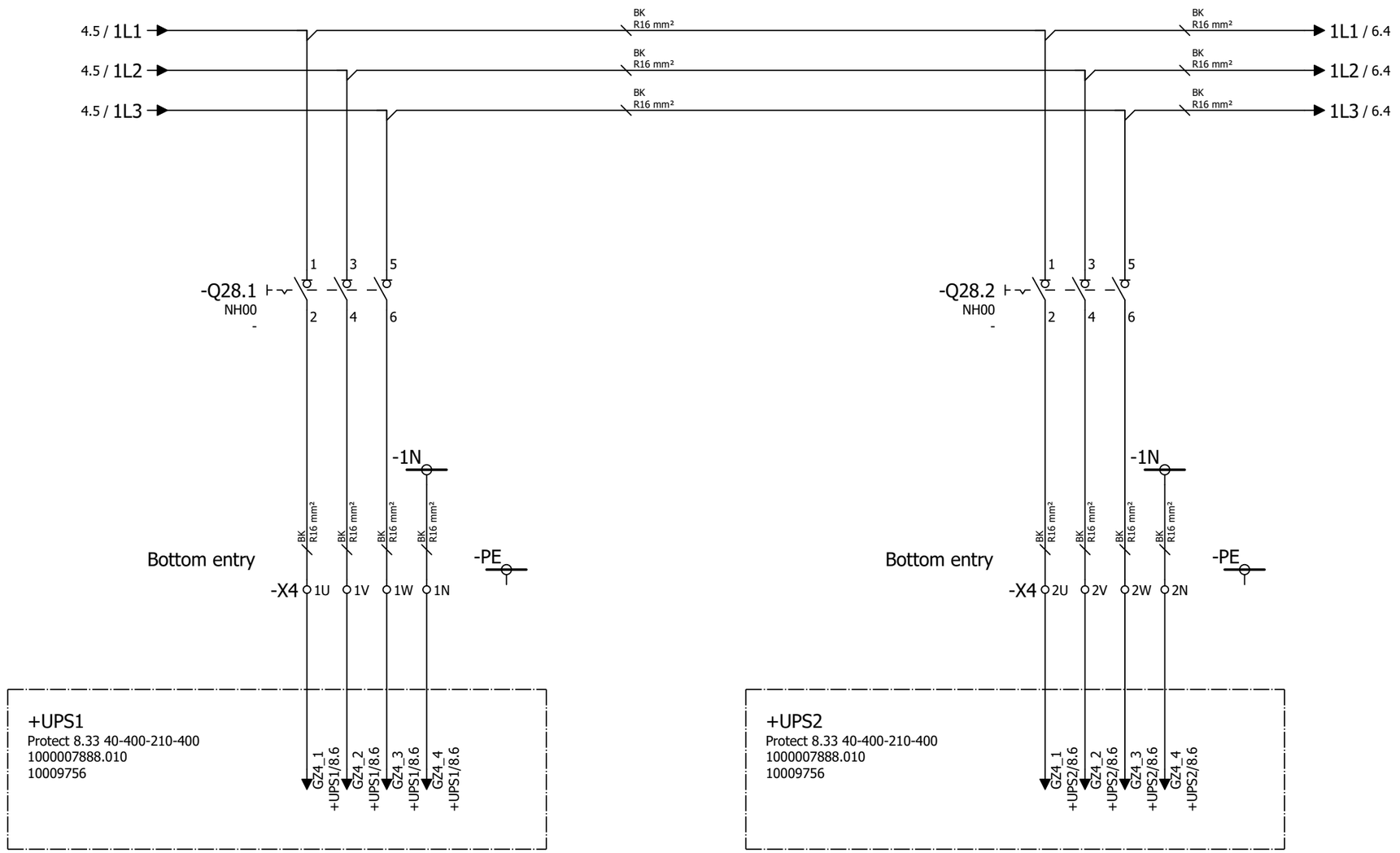


1000007888_010

				Date	17.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Bypass Transformator Bypass transformer cabinet with manual bypass 40 kVA Circuit diagram		=
				Editor	Beckschäfer					+ MBC1
				Checked	Ch.Peck			1000007888.020 10009757	1000007888_010 en	& EFS
Stat	Alteration	Date	Name	Norm						A3 sheet 4 / sheets 17

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1000007888_010

				Date	22.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	SBS mains Bypass transformer cabinet with manual bypass 40 kVA Circuit diagram	=
				Editor	Beckschäfer				+ MBC1
				Checked	Ch.Peck			1000007888.020 10009757	& EFS
Stat	Alteration	Date	Name	Norm				1000007888_010 en	A3 sheet 5 / sheets 17

CAE EPLAN Electric P8

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1000007888_010

+UPS1
Protect 8.33 40-400-210-400
1000007888.010
10009756

GZ3_1 +UPS1/8.2
GZ3_2 +UPS1/8.2
GZ3_3 +UPS1/8.2
GZ3_4 +UPS1/8.3

Bottom entry

-X5 1U 1V 1W 1N -PE

BK R16 mm²

-1N

-Q71
NH00
-
2 4 6
1 3 5

+UPS2
Protect 8.33 40-400-210-400
1000007888.010
10009756

GZ3_1 +UPS2/8.2
GZ3_2 +UPS2/8.2
GZ3_3 +UPS2/8.2
GZ3_4 +UPS2/8.3

Bottom entry

-X5 2U 2V 2W 2N -PE

-1N

-Q72
NH00
-
2 4 6
1 3 5

BK R16 mm²

5.7 / 1L1
5.7 / 1L2
5.7 / 1L3

-Q29
115A
1 3 5 7 9 11 101 103
1 INV operation
2 Manual bypass
2/4 6/8 10/12
2 6 10 102 104

-1L3 Cu 30x5 mm
-1L2 Cu 30x5 mm
-1L1 Cu 30x5 mm

Switch position
Q29

Top entry

-X12 1 2 3

BK R0,75 mm²

				Date	22.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Manual bypass Bypass transformer cabinet with manual bypass 40 kVA Circuit diagram
				Editor	Beckschäfer			
01	500000002053	13.08.2024	Beckschäfer	Checked	Ch.Peck			
Stat	Alteration	Date	Name	Norm				

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1000007888_010 en

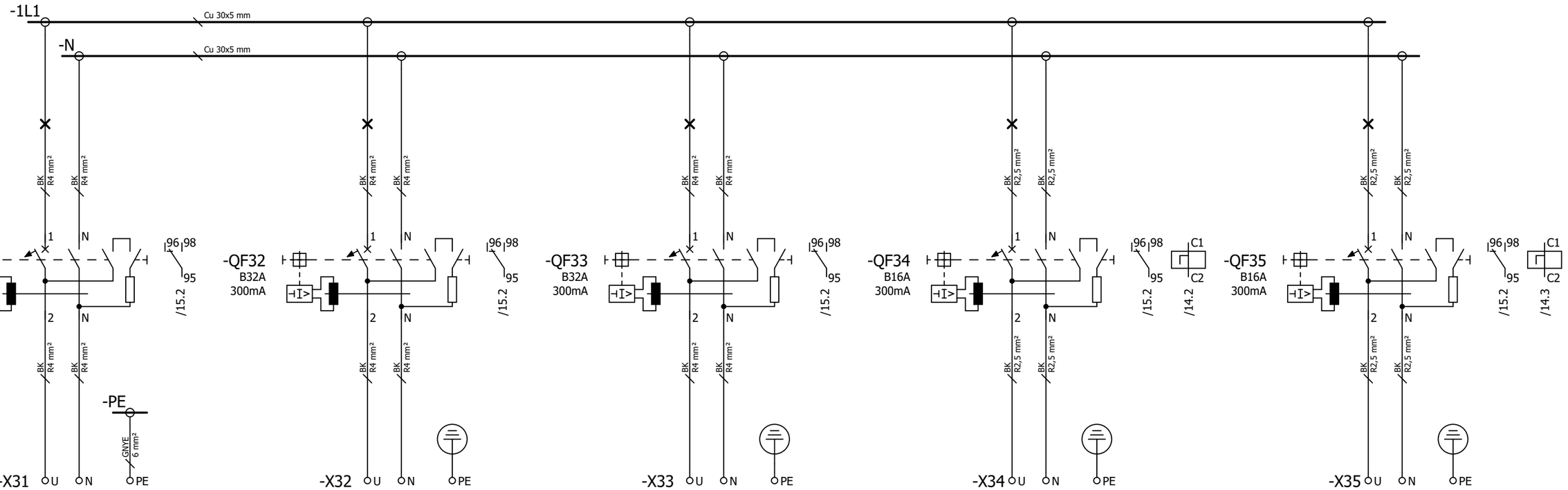
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& EFS

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Load
230V/N/PE~50Hz

SPARE

Load
230V/N/PE~50Hz

SPARE

Load
230V/N/PE~50Hz

SPARE

Load
230V/N/PE~50Hz

CP-630-E1
UCP-INSTRUMENT AIR PACKAGE
1.5KW

Load
230V/N/PE~50Hz

CP-640-E1
UCP-N2 PACKAGE
1.5KW

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				Date	23.05.2024
01	500000002053	13.08.2024	Beckschäfer	Editor	Beckschäfer
02	500000002089	27.08.2024	Beckschäfer	Checked	Ch.Peck
Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Load
Bypass transformer cabinet
with manual bypass 40 kVA
Circuit diagram

1000007888.020
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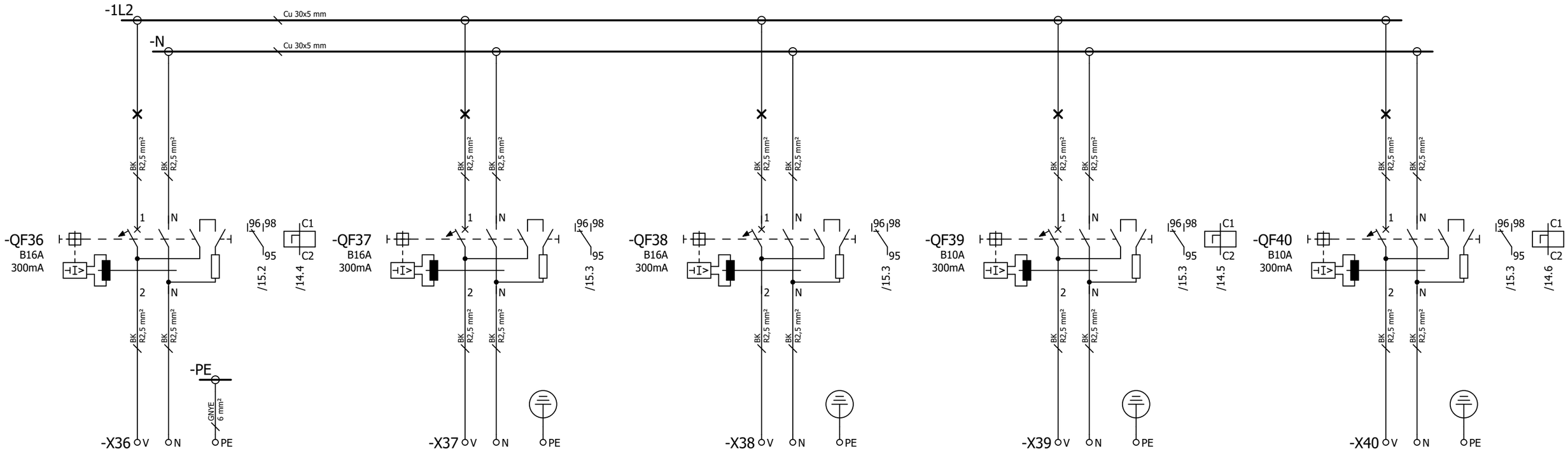
=
+ MBC1
& EFS

A3

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Load
230V/N/PE~50Hz

JB-500-F8
UCP WATER PACKAGE
2KW

Load
230V/N/PE~50Hz

B400-SRV-001
SERVER CABINET ITER - LINE A

Load
230V/N/PE~50Hz

B400-SRV-001
SERVER CABINET ITER - LINE B

Load
230V/N/PE~50Hz

B100-HSB-001
UCP-HVAC HV ROOM
0.5KW

Load
230V/N/PE~50Hz

B200-HSB-001
UCP-HVAC LV ROOM
0.5KW

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				Date	23.05.2024
01	500000002053	13.08.2024	Beckschäfer	Editor	Beckschäfer
02	500000002089	27.08.2024	Beckschäfer	Checked	Ch.Peck
Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Load
Bypass transformer cabinet
with manual bypass 40 kVA
Circuit diagram

1000007888.020
10009757

1000007888_010 en

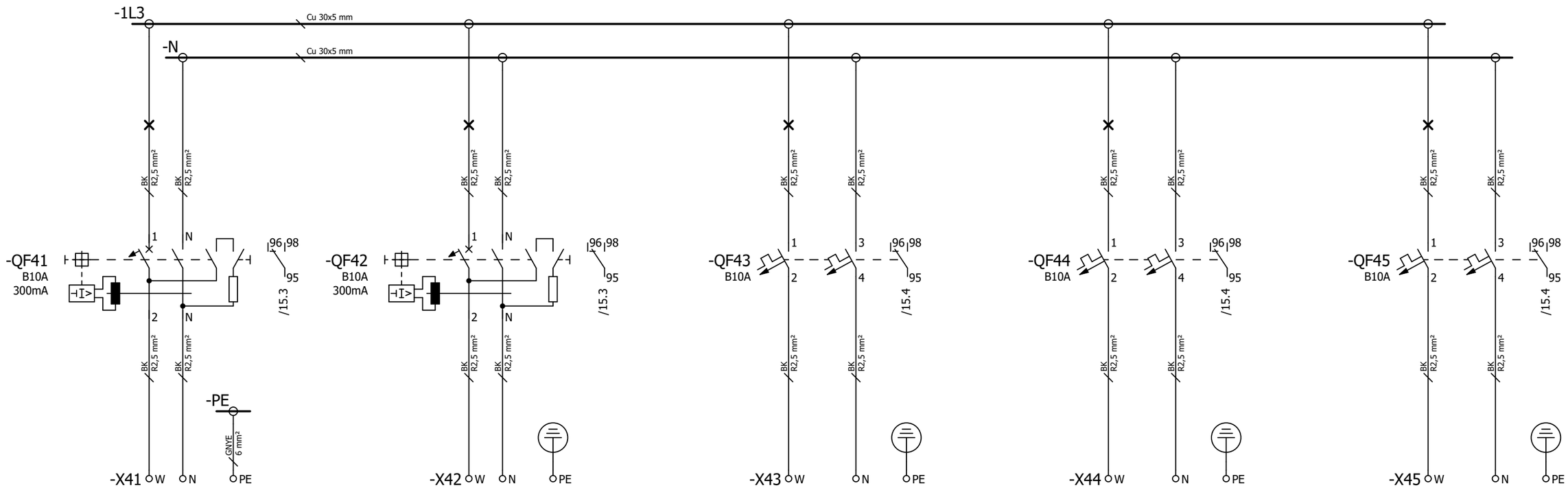
=
+ MBC1
& EFS

A3

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sheets 17

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Load
230V/N/PE~50Hz

B300-HSB-001
UCP-HVAC UPS ROOM
0.5KW

Load
230V/N/PE~50Hz

B300-HSB-001
UCP-HVAC ITER
0.5KW

Load
230V/N/PE~50Hz

B400-SIS-001
SIS-CONTROLLER AND I/O
CABINET-LINE A - 1KW

Load
230V/N/PE~50Hz

B400-SIS-001
SIS-CONTROLLER AND I/O
CABINET-LINE B - 1KW

Load
230V/N/PE~50Hz

B400-PCS-001
PCS-CONTROLLER AND I/O
CABINET-LINE A - 1.5KW

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				Date	23.05.2024
01	500000002053	13.08.2024	Beckschäfer	Editor	Beckschäfer
02	500000002089	27.08.2024	Beckschäfer	Checked	Ch.Peck
Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Load
Bypass transformer cabinet
with manual bypass 40 kVA
Circuit diagram

1000007888.020
10009757

1000007888_010 en

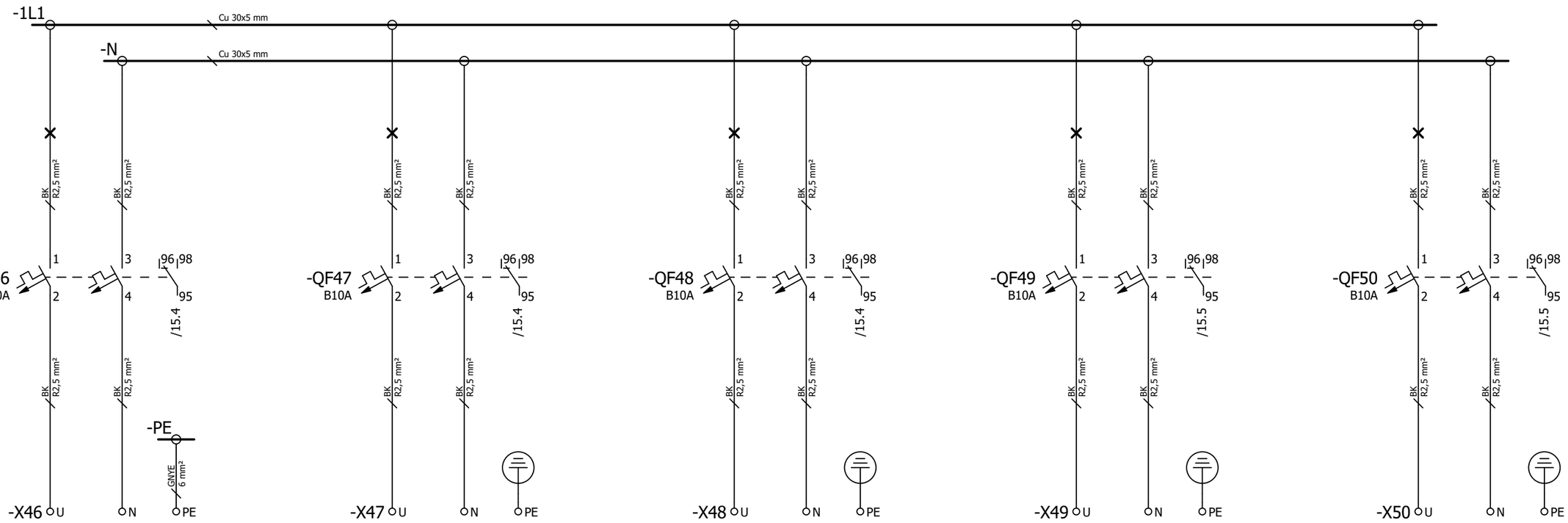
=
+ MBC1
& EFS

A3

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Load
230V/N/PE~50Hz

B400-PCS-001
PCS-CONTROLLER AND I/O
CABINET-LINE B - 1.5KW

Load
230V/N/PE~50Hz

B400-EMCS-001
EMCS-CONTROLLER AND I/O
CABINET-LINE A - 1KW

Load
230V/N/PE~50Hz

B400-EMCS-001
EMCS-CONTROLLER AND I/O
CABINET-LINE B - 1KW

Load
230V/N/PE~50Hz

SG-200-N1
LV SWITCHBOARD AUXILIARY
1KW

Load
230V/N/PE~50Hz

SPARE

1000007888_010

				Date	23.05.2024
01	500000002053	13.08.2024	Beckschäfer	Editor	Beckschäfer
02	500000002089	27.08.2024	Beckschäfer	Checked	Ch.Peck
Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Load
Bypass transformer cabinet
with manual bypass 40 kVA
Circuit diagram

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10009757

1000007888_010 en

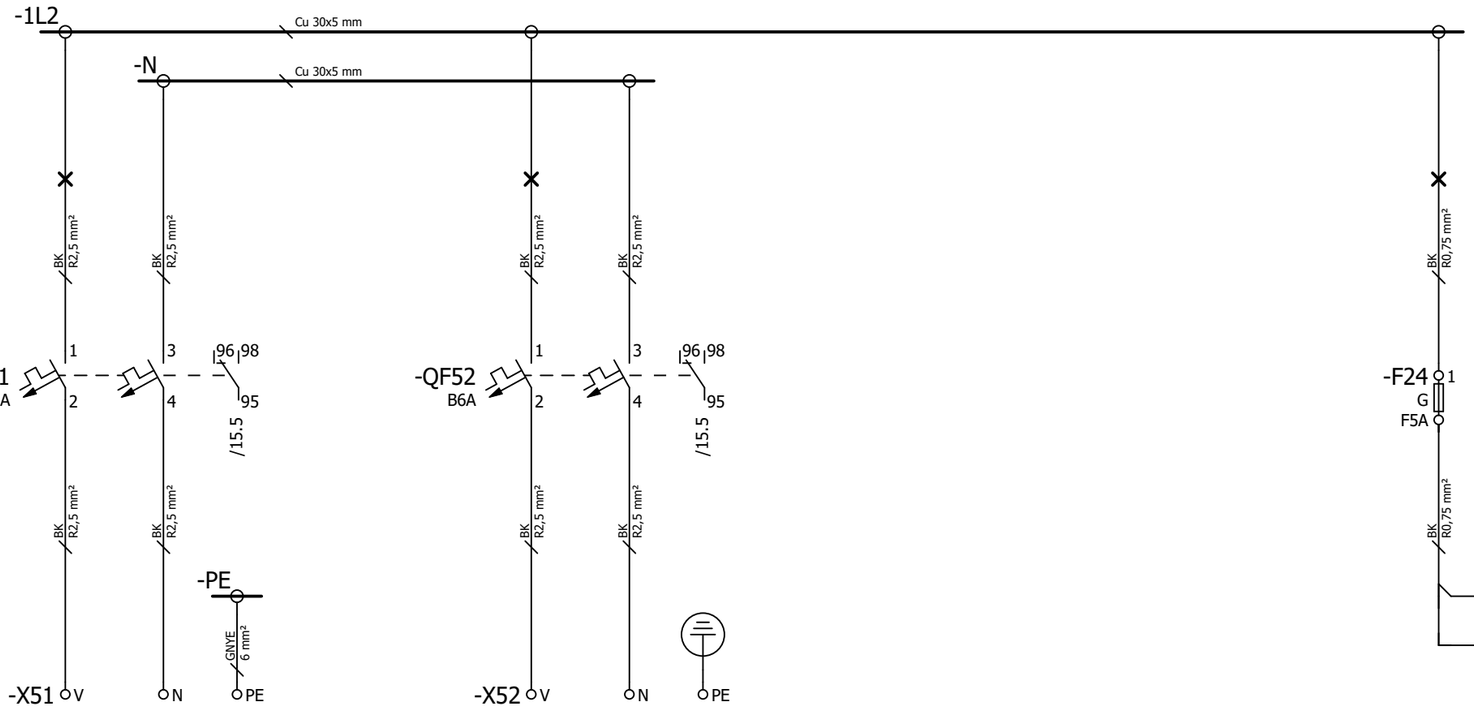
=
+ MBC1
& EFS

A3

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sheets 17

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Load
230V/N/PE~50Hz

SG-200-D2
LV SWITCHBOARD
800/460V AUXILIARY

Load
230V/N/PE~50Hz

SPARE
0.5KW

1000007888_010

				Date	13.08.2024
01	500000002053	13.08.2024	Beckschäfer	Editor	Beckschäfer
02	500000002089	27.08.2024	Beckschäfer	Checked	Ch.Peck
Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Load
Bypass transformer cabinet
with manual bypass 40 kVA
Circuit diagram

1000007888.020
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1000007888_010 en

=
+ MBC1
& EFS

A3

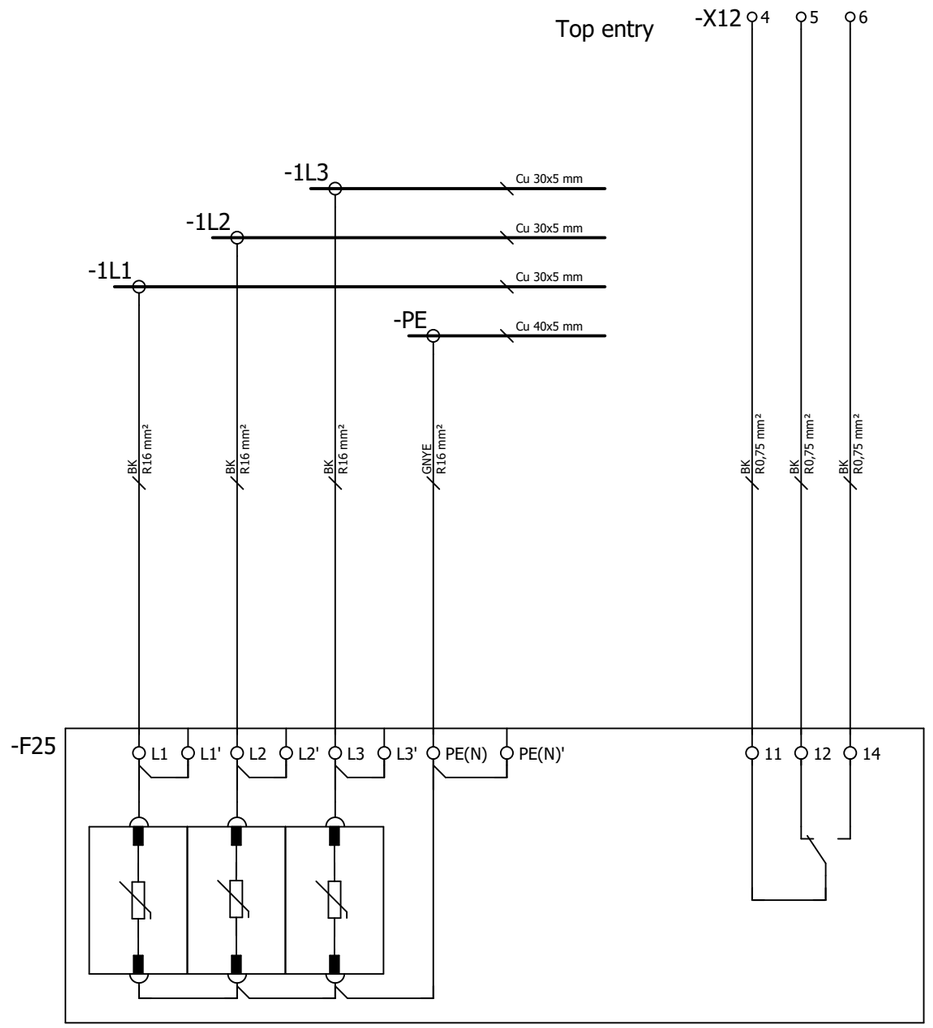
sheet 11
sheets 17

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status
Surge arrester

Top entry



1000007888_010

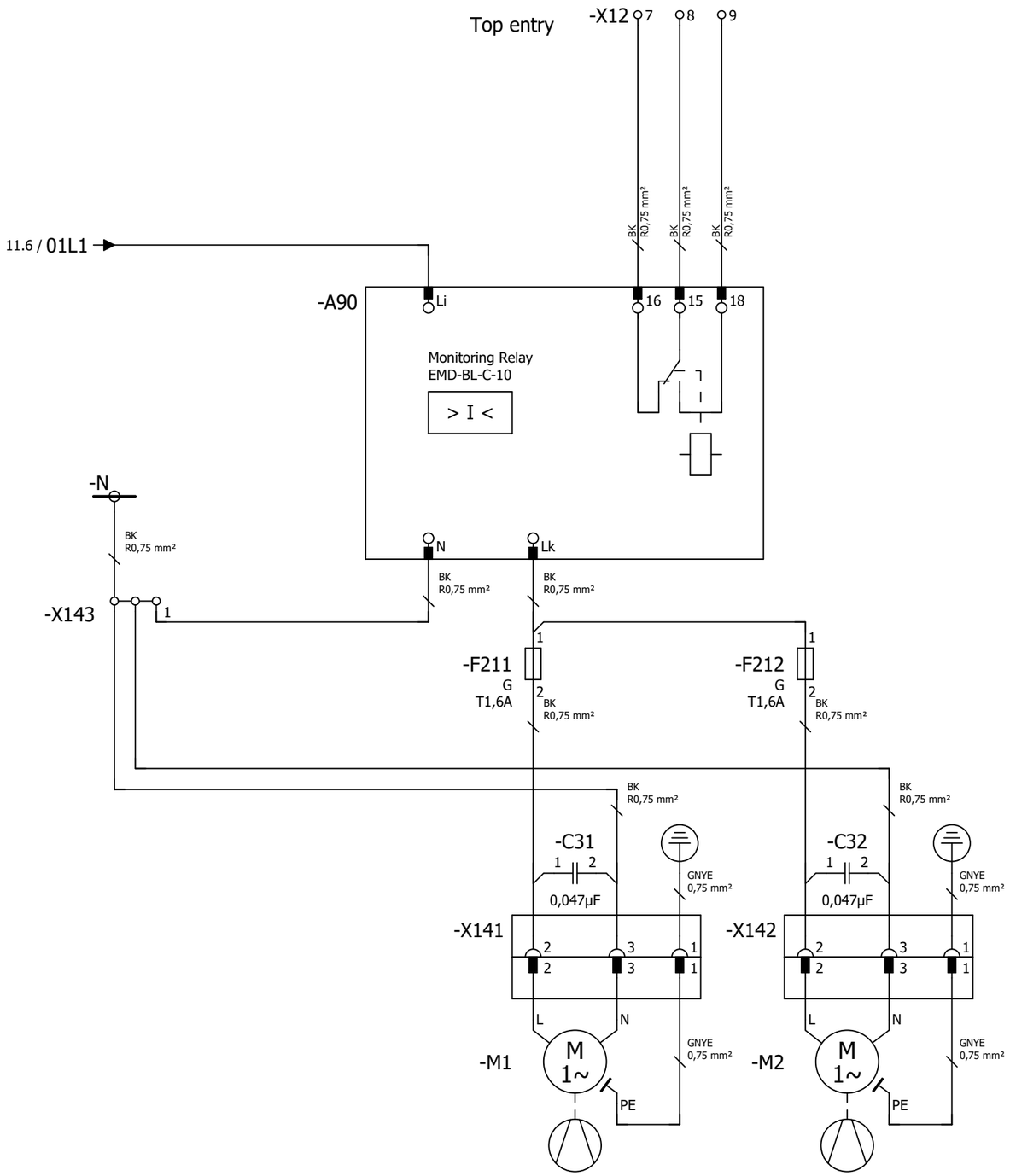
				Date	28.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Surge arrester Bypass transformer cabinet with manual bypass 40 kVA Circuit diagram	=
				Editor	Beckschäfer				+ MBC1
01	500000002053	13.08.2024	Beckschäfer	Checked	Ch.Peck			1000007888.020	& EFS
Stat	Alteration	Date	Name	Norm				10009757	1000007888_010 en

A3 | sheet 12 | sheets 17

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Fan fault

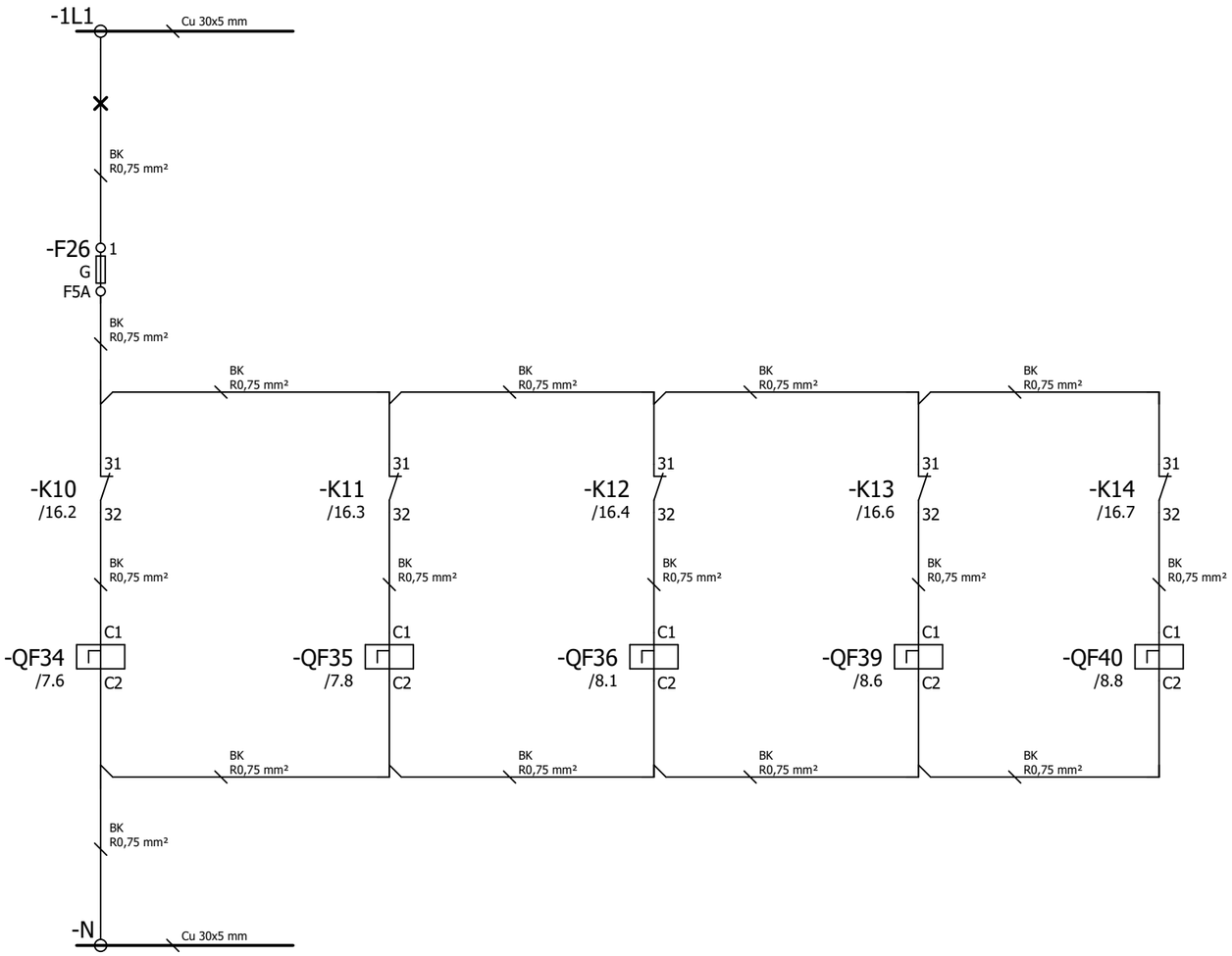


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				Date	22.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Fan control Bypass transformer cabinet with manual bypass 40 kVA Circuit diagram		=
				Editor	Beckschäfer					+ MBC1
01	500000002053	13.08.2024	Beckschäfer	Checked	Ch.Peck			1000007888.020		& EFS
Stat	Alteration	Date	Name	Norm				10009757	1000007888_010 en	A3 sheet 13 / sheets 17

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1000007888_010

				Date	03.06.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Tripping Bypass transformer cabinet with manual bypass 40 kVA Circuit diagram	=
01	500000002053	13.08.2024	Beckschäfer	Editor	Beckschäfer				+ MBC1
02	500000002089	27.08.2024	Beckschäfer	Checked	Ch.Peck			1000007888.020	& EFS
Stat	Alteration	Date	Name	Norm				10009757	1000007888_010 en

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11.6 / 02L1

BK R0,75 mm²

-QF31 /7.2
-QF32 /7.3
-QF33 /7.4
-QF34 /7.6
-QF35 /7.8
-QF36 /8.1
-QF37 /8.3
-QF38 /8.5
-QF39 /8.6
-QF40 /8.8
-QF41 /9.2
-QF42 /9.3
-QF43 /9.4
-QF44 /9.6
-QF45 /9.7
-QF46 /10.2
-QF47 /10.3
-QF48 /10.4
-QF49 /10.6
-QF50 /10.7
-QF51 /11.2
-QF52 /11.3

96 98 / 95

-K1
-K2
A1(+)
A2(-)

-N

PXC.2966207_PLC-RSC-230UC/21
14 12 — 11 /15.7

Common fault

QF31 - QF52

Top entry

-X12 10 11 12

-K1 /15.3
-K2 /15.5

11 12 14

				Date	22.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Common fault Bypass transformer cabinet with manual bypass 40 kVA Circuit diagram		=
				Editor	Beckschäfer					+ MBC1
01	500000002053	13.08.2024	Beckschäfer	Checked	Ch.Peck				1000007888.020	& EFS
Stat	Alteration	Date	Name	Norm					10009757	1000007888_010 en

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QF34 (C16A)

24V DC is permanently present in fault-free operation

QF35 (C16A)

24V DC is permanently present in fault-free operation

QF36 (C16A)

24V DC is permanently present in fault-free operation

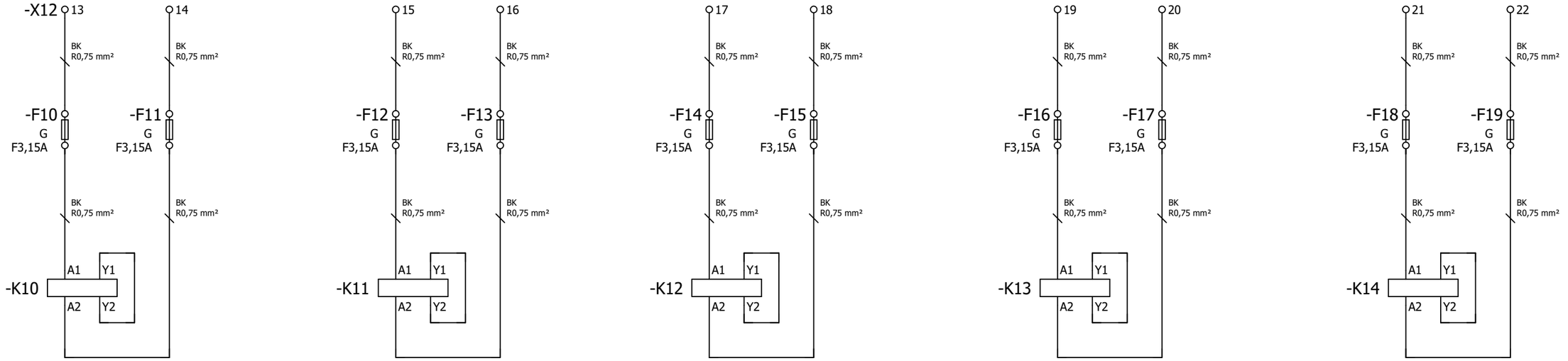
QF39(C10A)

24V DC is permanently present in fault-free operation

QF40(C10A)

24V DC is permanently present in fault-free operation

Top entry



PXC.2981020_PSR-SCP- 24DC/ESP4/2X1/1X2

13 – 14
23 – 24
31 – 32 /14.2

PXC.2981020_PSR-SCP- 24DC/ESP4/2X1/1X2

13 – 14
23 – 24
31 – 32 /14.3

PXC.2981020_PSR-SCP- 24DC/ESP4/2X1/1X2

13 – 14
23 – 24
31 – 32 /14.4

PXC.2981020_PSR-SCP- 24DC/ESP4/2X1/1X2

13 – 14
23 – 24
31 – 32 /14.5

PXC.2981020_PSR-SCP- 24DC/ESP4/2X1/1X2

13 – 14
23 – 24
31 – 32 /14.6

1000007888_010

				Date	03.06.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Remote signaling Bypass transformer cabinet with manual bypass 40 kVA Circuit diagram	=
01	500000002053	13.08.2024	Beckschäfer	Editor	Beckschäfer				+ MBC1
02	500000002089	27.08.2024	Beckschäfer	Checked	Ch.Peck			1000007888.020 10009757	& EFS
Stat	Alteration	Date	Name	Norm				1000007888_010 en	A3 sheet 16 / sheets 17

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+UPS1
Protect 8.33 40-400-210-400
1000007888.010
10009756

GZ13_1
+UPS1/23.7

GZ13_2
+UPS1/23.7

+UPS2
Protect 8.33 40-400-210-400
1000007888.010
10009756

GZ13_1
+UPS2/23.2

GZ13_2
+UPS2/23.3

BK
R1,5 mm²

BK
R1,5 mm²

Top entry

-X13 U U N N PE PE

BK
R0,75 mm²

BK
R0,75 mm²

-F100 1
G
T6,3A

BK
R0,75 mm²

-F85 L
I
3 2

BK
R0,75 mm²

-A85 -X1 3 2

-R1

Top entry

-X14 U U N N

BK
R0,75 mm²

-F110 1
G
T6,3A 2

BK
R0,75 mm²

BK
R0,75 mm²

-X114 U N

-W100
H05VV
2x1 mm²
3 m

L N

-H1
Enclosure light

1000007888_010

				Date	22.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	external connection Bypass transformer cabinet with manual bypass 40 kVA Circuit diagram	=
				Editor	Beckschäfer				+ MBC1
				Checked	Ch.Peck			1000007888.020 10009757	& EFS
Stat	Alteration	Date	Name	Norm				1000007888_010 en	A3 sheet 17 / sheets 17

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Terminal diagram

bar

=+MBC1-PE

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				PE						+MBC1&EFS/1.3
				PE						+MBC1&EFS/1.3
				PE						+MBC1&EFS/1.6
				PE						+MBC1&EFS/1.6
		+UPS1-PE	PE	PE						+MBC1&EFS/2.3
				PE						+MBC1&EFS/2.3
		+UPS2-PE	PE	PE						+MBC1&EFS/3.3
				PE						+MBC1&EFS/3.3
				PE						+MBC1&EFS/5.4
				PE						+MBC1&EFS/5.7
				PE						+MBC1&EFS/6.3
				PE						+MBC1&EFS/6.6

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				Date	27.08.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Terminal diagram =+MBC1-PE Bypass transformer cabinet with manual bypass 40 kVA Terminal diagram		=
				Editor	Beckschäfer					+ MBC1
01	500000002053	13.08.2024	Beckschäfer	Checked	Ch.Peck				1000007888_010 en	& EMA
Stat	Alteration	Date	Name	Norm						A3

sheet 1
sheets 34

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Terminal diagram

bar

=+MBC1-X1

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable type	Cable name	Position / Page
				1U	'	-X1	2U			+MBC1&EFS/1.3
				1V	'	-X1	2V			+MBC1&EFS/1.3
				1W	'	-X1	2W			+MBC1&EFS/1.3
		+UPS1-E1-X1	U	2U	'	-X1	1U			+MBC1&EFS/1.3
		+UPS1-E1-X1	V	2V	'	-X1	1V			+MBC1&EFS/1.3
		+UPS1-E1-X1	W	2W	'	-X1	1W			+MBC1&EFS/1.3
				3U	'	-X1	4U			+MBC1&EFS/1.6
				3V	'	-X1	4V			+MBC1&EFS/1.6
				3W	'	-X1	4W			+MBC1&EFS/1.6
		+UPS2-E1-X1	U	4U	'	-X1	3U			+MBC1&EFS/1.6
		+UPS2-E1-X1	V	4V	'	-X1	3V			+MBC1&EFS/1.6
		+UPS2-E1-X1	W	4W	'	-X1	3W			+MBC1&EFS/1.6

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Terminal diagram

bar

=+MBC1-X2

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable type	Cable name	Position / Page
		+UPS1-E2-X2	L+	1L+	'	-X2	2L+			+MBC1&EFS/2.2
		+UPS1-E2-X2	L-	1L-	'	-X2	2L-			+MBC1&EFS/2.3
				2L+	'	-X2	1L+			+MBC1&EFS/2.2
				2L-	'	-X2	1L-			+MBC1&EFS/2.3
		+UPS2-E2-X2	L+	3L+	'	-X2	4L+			+MBC1&EFS/3.2
		+UPS2-E2-X2	L-	3L-	'	-X2	4L-			+MBC1&EFS/3.3
				4L+	'	-X2	3L+			+MBC1&EFS/3.2
				4L-	'	-X2	3L-			+MBC1&EFS/3.3

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				Date	27.08.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS
				Editor	Beckschäfer		
01	500000002053	13.08.2024	Beckschäfer	Checked	Ch.Peck		
Stat	Alteration	Date	Name	Norm			

Terminal diagram =+MBC1-X2
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

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+ MBC1
& EMA

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sheet 3
sheets 34

CAE EPLAN Electric P8

Terminal diagram

bar

=+MBC1-X4

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+UPS1-E4-X4	U	1U	'	-Q28.1	2			+MBC1&EFS/5.3
		+UPS1-E4-X4	V	1V	'	-Q28.1	4			+MBC1&EFS/5.3
		+UPS1-E4-X4	W	1W	'	-Q28.1	6			+MBC1&EFS/5.3
		+UPS1-E4-X4	N	1N	'	-1N				+MBC1&EFS/5.4
		+UPS2-E4-X4	U	2U	'	-Q28.2	2			+MBC1&EFS/5.6
		+UPS2-E4-X4	V	2V	'	-Q28.2	4			+MBC1&EFS/5.6
		+UPS2-E4-X4	W	2W	'	-Q28.2	6			+MBC1&EFS/5.6
		+UPS2-E4-X4	N	2N	'	-1N				+MBC1&EFS/5.6

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				Date	27.08.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS
				Editor	Beckschäfer		
01	500000002053	13.08.2024	Beckschäfer	Checked	Ch.Peck		
Stat	Alteration	Date	Name	Norm			

Terminal diagram =+MBC1-X4
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

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+ MBC1
& EMA

A3

sheet 4
sheets 34

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Terminal diagram

bar

=+MBC1-X5

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable type	Cable name	Position / Page
		+UPS1-E3-X3	U	1U	'	-Q71	2			+MBC1&EFS/6.3
		+UPS1-E3-X3	V	1V	'	-Q71	4			+MBC1&EFS/6.3
		+UPS1-E3-X3	W	1W	'	-Q71	6			+MBC1&EFS/6.3
		+UPS1-E3-X3	N	1N	'	-1N				+MBC1&EFS/6.3
		+UPS2-E3-X3	U	2U	'	-Q72	2			+MBC1&EFS/6.5
		+UPS2-E3-X3	V	2V	'	-Q72	4			+MBC1&EFS/6.5
		+UPS2-E3-X3	W	2W	'	-Q72	6			+MBC1&EFS/6.6
		+UPS2-E3-X3	N	2N	'	-1N				+MBC1&EFS/6.6

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				Date	27.08.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Terminal diagram =+MBC1-X5 Bypass transformer cabinet with manual bypass 40 kVA Terminal diagram		=	
				Editor	Beckschäfer					+ MBC1	
01	500000002053	13.08.2024	Beckschäfer	Checked	Ch.Peck				1000007888_010 en	& EMA	A3 sheet 5
Stat	Alteration	Date	Name	Norm							sheets 34

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Terminal diagram

bar

=+MBC1-X10

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U	'	-Q10	1			+MBC1&EFS/4.4
				V	'	-Q10	3			+MBC1&EFS/4.5
				W	'	-Q10	5			+MBC1&EFS/4.5

			Date	27.08.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm
			Editor	Beckschäfer	
01	500000002053	13.08.2024	Checked	Ch.Peck	
Stat	Alteration	Date	Norm		

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X10
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

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+ MBC1
& EMA

A3

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sheets 34

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Terminal diagram

bar

=+MBC1-X12

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1	'	-Q29	103			+MBC1&EFS/6.7
				2	'	-Q29	104			+MBC1&EFS/6.7
				3	'	-Q29	102			+MBC1&EFS/6.7
				4	'	-F25	11			+MBC1&EFS/12.6
				5	'	-F25	12			+MBC1&EFS/12.6
				6	'	-F25	14			+MBC1&EFS/12.6
				7	'	-A90	16			+MBC1&EFS/13.4
				8	'	-A90	15			+MBC1&EFS/13.4
				9	'	-A90	18			+MBC1&EFS/13.4
				10	'	-K1	12			+MBC1&EFS/15.7
				11	'	-K1	11			+MBC1&EFS/15.7
				12	'	-K2	14			+MBC1&EFS/15.7
				13	'	-F10	1:1			+MBC1&EFS/16.2
				14	'	-F11	1:1			+MBC1&EFS/16.2
				15	'	-F12	1:1			+MBC1&EFS/16.3
				16	'	-F13	1:1			+MBC1&EFS/16.3
				17	'	-F14	1:1			+MBC1&EFS/16.4
				18	'	-F15	1:1			+MBC1&EFS/16.5
				19	'	-F16	1:1			+MBC1&EFS/16.6
				20	'	-F17	1:1			+MBC1&EFS/16.6
				21	'	-F18	1:1			+MBC1&EFS/16.7
				22	'	-F19	1:1			+MBC1&EFS/16.8

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				Date	27.08.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Terminal diagram =+MBC1-X12 Bypass transformer cabinet with manual bypass 40 kVA Terminal diagram	=
01	500000002053	13.08.2024	Beckschäfer	Editor	Beckschäfer				+ MBC1
02	500000002089	27.08.2024	Beckschäfer	Checked	Ch.Peck			1000007888_010 en	& EMA
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Terminal diagram

bar
=+MBC1-X13

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+UPS1-X14	U	U	●┃	-F100	1:1			+MBC1&EFS/17.2
		-X14	U	U	●					+MBC1&EFS/17.2
		+UPS1-X14	N	N	●┃	-A85	-X1:2			+MBC1&EFS/17.3
		-X14	N	N	●					+MBC1&EFS/17.3
				PE	'					+MBC1&EFS/17.3
				PE	'					+MBC1&EFS/17.3

				Date	27.08.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS
				Editor	Beckschäfer		
01	500000002053	13.08.2024	Beckschäfer	Checked	Ch.Peck		
Stat	Alteration	Date	Name	Norm			

Terminal diagram =+MBC1-X13
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

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& EMA

A3

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sheets 34

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Terminal diagram

bar

=+MBC1-X14

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		-X13	U	U		-F110	1:2			+MBC1&EFS/17.6
		+UPS2-X13	U	U						+MBC1&EFS/17.6
		-X13	N	N		-X114	N			+MBC1&EFS/17.7
		+UPS2-X13	N	N						+MBC1&EFS/17.7

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				Date	27.08.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Terminal diagram =+MBC1-X14 Bypass transformer cabinet with manual bypass 40 kVA Terminal diagram		=	
				Editor	Beckschäfer					+ MBC1	
01	500000002053	13.08.2024	Beckschäfer	Checked	Ch.Peck				1000007888_010 en	& EMA	A3 sheet 9
Stat	Alteration	Date	Name	Norm							sheets 34

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Terminal diagram

bar
=+MBC1-X15

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable type	Cable name	Position / Page
		+UPS1-X15	2	2	'	-X15	4			+MBC1&EFS/2.4
		+UPS2-X15	2	6	'	-X15	8			+MBC1&EFS/3.4
				4	'	-X15	2			+MBC1&EFS/2.4
				8	'	-X15	6			+MBC1&EFS/3.4
		+UPS1-X15	3	3	'	-X15	5			+MBC1&EFS/2.4
		+UPS2-X15	3	7	'	-X15	9			+MBC1&EFS/3.4
				5	'	-X15	3			+MBC1&EFS/2.4
				9	'	-X15	7			+MBC1&EFS/3.4

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X15
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

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+ MBC1
& EMA

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sheets 34

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Terminal diagram

bar
=+MBC1-X31

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U	'	-QF31	2			+MBC1&EFS/7.2
				N	'	-QF31	N			+MBC1&EFS/7.2
				PE	'	-PE				+MBC1&EFS/7.2

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Terminal diagram

bar

=+MBC1-X32

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U	'	-QF32	2			+MBC1&EFS/7.3
				N	'	-QF32	N			+MBC1&EFS/7.3
				PE	'					+MBC1&EFS/7.3

				Date	27.08.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS
				Editor	Beckschäfer		
01	500000002053	13.08.2024	Beckschäfer	Checked	Ch.Peck		
Stat	Alteration	Date	Name	Norm			

Terminal diagram =+MBC1-X32
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

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=
+ MBC1
& EMA

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sheets 34

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Terminal diagram

bar

=+MBC1-X33

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U	'	-QF33	2			+MBC1&EFS/7.4
				N	'	-QF33	N			+MBC1&EFS/7.5
				PE	'					+MBC1&EFS/7.5

				Date	27.08.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Terminal diagram =+MBC1-X33 Bypass transformer cabinet with manual bypass 40 kVA Terminal diagram		=
				Editor	Beckschäfer					+ MBC1
01	500000002053	13.08.2024	Beckschäfer	Checked	Ch.Peck				1000007888_010 en	& EMA
Stat	Alteration	Date	Name	Norm						A3 sheet 13 / sheets 34

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Terminal diagram

bar
=+MBC1-X34

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U	'	-QF34	2			+MBC1&EFS/7.6
				N	'	-QF34	N			+MBC1&EFS/7.6
				PE						+MBC1&EFS/7.6

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Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X34
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

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=
+ MBC1
& EMA

A3

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sheets 34

CAE EPLAN Electric P8

Terminal diagram

bar
=+MBC1-X35

Cable name / Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name / Cable type	Position / Page
			U	'	-QF35	2		+MBC1&EFS/7.8
			N	'	-QF35	N		+MBC1&EFS/7.8
			PE					+MBC1&EFS/7.8

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Terminal diagram

bar

=+MBC1-X36

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable type	Cable name	Position / Page
				V	'	-QF36	2			+MBC1&EFS/8.1
				N	'	-QF36	N			+MBC1&EFS/8.2
		-PE		PE						+MBC1&EFS/8.2

				Date	27.08.2024
01	500000002053	13.08.2024	Beckschäfer	Editor	Beckschäfer
02	500000002089	27.08.2024	Beckschäfer	Checked	Ch.Peck
Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X36
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

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+ MBC1
& EMA

A3

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sheets 34

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Terminal diagram

bar

=+MBC1-X37

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable type	Cable name	Position / Page
				V	'	-QF37	2			+MBC1&EFS/8.3
				N	'	-QF37	N			+MBC1&EFS/8.3
				PE						+MBC1&EFS/8.3

				Date	27.08.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS
01	500000002053	13.08.2024	Beckschäfer	Editor	Beckschäfer		
02	500000002089	27.08.2024	Beckschäfer	Checked	Ch.Peck		
Stat	Alteration	Date	Name	Norm			

Terminal diagram =+MBC1-X37
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

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=
+ MBC1
& EMA

A3

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sheets 34

CAE EPLAN Electric P8

Terminal diagram

bar
=+MBC1-X38

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				V	'	-QF38	2			+MBC1&EFS/8.5
				N	'	-QF38	N			+MBC1&EFS/8.5
				PE						+MBC1&EFS/8.5

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X38
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

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=
+ MBC1
& EMA

A3

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sheets 34

CAE EPLAN Electric P8

Terminal diagram

bar
=+MBC1-X39

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable type	Cable name	Position / Page
				V	'	-QF39	2			+MBC1&EFS/8.6
				N	'	-QF39	N			+MBC1&EFS/8.6
				PE						+MBC1&EFS/8.6

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				Date	27.08.2024
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Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X39
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

1000007888_010 en

=
+ MBC1
& EMA

A3

sheet 19
sheets 34

CAE EPLAN Electric P8

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Terminal diagram

bar

=+MBC1-X40

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				V	'	-QF40	2			+MBC1&EFS/8.8
				N	'	-QF40	N			+MBC1&EFS/8.8
				PE						+MBC1&EFS/8.8

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				Editor	Beckschäfer		
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Terminal diagram =+MBC1-X40
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

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=
+ MBC1
& EMA

A3

sheet 20
sheets 34

CAE EPLAN Electric P8

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Terminal diagram

bar

=+MBC1-X41

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable type	Cable name	Position / Page
				W	'	-QF41	2			+MBC1&EFS/9.2
				N	'	-QF41	N			+MBC1&EFS/9.2
		-PE		PE						+MBC1&EFS/9.2

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X41
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

1000007888_010 en

=
+ MBC1
& EMA

A3

sheet 21
sheets 34

CAE EPLAN Electric P8

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Terminal diagram

bar

=+MBC1-X42

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				W	'	-QF42	2			+MBC1&EFS/9.3
				N	'	-QF42	N			+MBC1&EFS/9.3
				PE						+MBC1&EFS/9.3

CAE EPLAN Electric P8

Terminal diagram

bar
=+MBC1-X43

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				W	'	-QF43	2			+MBC1&EFS/9.4
				N	'	-QF43	4			+MBC1&EFS/9.5
				PE						+MBC1&EFS/9.5

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X43
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

1000007888_010 en

=
+ MBC1
& EMA

A3

sheet 23
sheets 34

CAE EPLAN Electric P8

Terminal diagram

bar
=+MBC1-X44

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				W	'	-QF44	2			+MBC1&EFS/9.6
				N	'	-QF44	4			+MBC1&EFS/9.6
				PE						+MBC1&EFS/9.6

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X44
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

1000007888_010 en

=
+ MBC1
& EMA

A3

sheet 24
sheets 34

CAE EPLAN Electric P8

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Terminal diagram

bar

=+MBC1-X45

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				W	'	-QF45	2			+MBC1&EFS/9.7
				N	'	-QF45	4			+MBC1&EFS/9.8
				PE						+MBC1&EFS/9.8

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Stat	Alteration	Date	Name	Norm			

Terminal diagram =+MBC1-X45
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

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=
+ MBC1
& EMA

A3

sheet 25
sheets 34

CAE EPLAN Electric P8

Terminal diagram

bar
=+MBC1-X46

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable type	Cable name	Position / Page
				U	'	-QF46	2			+MBC1&EFS/10.2
				N	'	-QF46	4			+MBC1&EFS/10.2
		-PE		PE						+MBC1&EFS/10.2

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X46
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

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=
+ MBC1
& EMA

A3

sheet 26
sheets 34

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Terminal diagram

bar

=+MBC1-X47

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U	'	-QF47	2			+MBC1&EFS/10.3
				N	'	-QF47	4			+MBC1&EFS/10.3
				PE						+MBC1&EFS/10.4

				Date	27.08.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS
				Editor	Beckschäfer		
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Stat	Alteration	Date	Name	Norm			

Terminal diagram =+MBC1-X47
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

1000007888_010 en

=
+ MBC1
& EMA

A3

sheet 27
sheets 34

CAE EPLAN Electric P8

Terminal diagram

bar
=+MBC1-X48

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U	'	-QF48	2			+MBC1&EFS/10.4
				N	'	-QF48	4			+MBC1&EFS/10.5
				PE						+MBC1&EFS/10.5

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X48
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

1000007888_010 en

=
+ MBC1
& EMA

A3

sheet 28
sheets 34

CAE EPLAN Electric P8

Terminal diagram

bar
=+MBC1-X49

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U	'	-QF49	2			+MBC1&EFS/10.6
				N	'	-QF49	4			+MBC1&EFS/10.6
				PE						+MBC1&EFS/10.6

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Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X49
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

1000007888_010 en

=
+ MBC1
& EMA

A3

sheet 29
sheets 34

CAE EPLAN Electric P8

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Terminal diagram

bar

=+MBC1-X50

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable type	Cable name	Position / Page
				U	'	-QF50	2			+MBC1&EFS/10.7
				N	'	-QF50	4			+MBC1&EFS/10.8
				PE						+MBC1&EFS/10.8

				Date	27.08.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS
				Editor	Beckschäfer		
01	500000002053	13.08.2024	Beckschäfer	Checked	Ch.Peck		
Stat	Alteration	Date	Name	Norm			

Terminal diagram =+MBC1-X50
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

1000007888_010 en

=
+ MBC1
& EMA

A3

sheet 30
sheets 34

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Terminal diagram

bar

=+MBC1-X51

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				V	'	-QF51	2			+MBC1&EFS/11.2
				N	'	-QF51	4			+MBC1&EFS/11.2
		-PE		PE						+MBC1&EFS/11.2

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Terminal diagram

bar

=+MBC1-X52

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				V	'	-QF52	2			+MBC1&EFS/11.3
				N	'	-QF52	4			+MBC1&EFS/11.3
				PE						+MBC1&EFS/11.4

				Date	27.08.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Terminal diagram =+MBC1-X52 Bypass transformer cabinet with manual bypass 40 kVA Terminal diagram		=
				Editor	Beckschäfer					+ MBC1
01	500000002053	13.08.2024	Beckschäfer	Checked	Ch.Peck				1000007888_010 en	& EMA
Stat	Alteration	Date	Name	Norm						A3

sheet 32
sheets 34

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Terminal diagram

bar

=+MBC1-X91

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+UPS1-F91	1	1M	'	-X91	2M			+MBC1&EFS/2.5
				2M	'	-X91	1M			+MBC1&EFS/2.5
		+UPS2-F91	1	3M	'	-X91	4M			+MBC1&EFS/3.5
				4M	'	-X91	3M			+MBC1&EFS/3.5

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				Date	27.08.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm
				Editor	Beckschäfer	
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Stat	Alteration	Date	Name	Norm		

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X91
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

1000007888_010 en

=
+ MBC1
& EMA

A3

sheet 33
sheets 34

Terminal diagram

bar

=+MBC1-X130

Cable type	Destination mark External	Connection	Terminal	Bridge 1 2 3	Destination mark Internal	Connection	Cable type	-W208 LiYCY 3x0,5 mm²	-W100 H05VV 2x1 mm²		Position / Page
	+BAT1-R81-X1	1	1	'	+UPS1-X130	1		WH			+MBC1&EFS/2.6
	+BAT2-R81-X1	1	3	'							+MBC1&EFS/3.6
	+BAT1-R81-X1	2	2	'	+UPS1-X130	2		BN			+MBC1&EFS/2.6
	+BAT2-R81-X1	2	4	'							+MBC1&EFS/3.6
			1PE	'					OG		+MBC1&EFS/2.6
			2PE	'					OG		+MBC1&EFS/3.6

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X130
Bypass transformer cabinet
with manual bypass 40 kVA
Terminal diagram

1000007888_010 en

=
+ MBC1
& EMA

A3

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Three-phase input
Attention! Observe sequence of wires, L1, L2, L3 -->
See technical data sheet for required mains fuses

Power section rectifier

mains transformer

Note: Reinforced insulated wire
0,75 mm² unmarked wires

-L61
N=2

Measurement REC Interface -A9-A50-X2
Supply REC Interface -A9-A50-X3

01L1 / 12.6
01L2 / 12.6
01L3 / 12.6
02L1 / 11.1
02L2 / 11.1
02L3 / 11.1

-L22
-T40
-L85.1
-L85.2

1L1 / 2.1
1L2 / 2.1
1L3 / 2.1
2L1 / 3.1
2L2 / 3.1
2L3 / 3.1

-C101.1
-C101.2
-C101.3
-Q3
-Q1
L=100/85A
I=1,0kA
Icu=50kA
/12.4
/12.3
3xR6 mm²

-A80
-A81
Suppression
-V81.1-V81.6
-R81 -R82 -R83
-R84.1 -R84.2
-R86 -R87 -R88
90 89
-C84
-C85

-E1
-X1 U V W
-A2
-A1
EMI capacitor 4-pole 8000022634 STR
-C4 -C5 -C1 -C6 -C2 -C7 -C3 -C8 -C9 -C10
-X1 -X2 -X3
-L92

Mains
400V;3/PE~50Hz

-PE
PE busbar
Cu 40x5 mm

Rack
GNYE
6 mm²
Tür links
Pivot plate

+MBC1
Bypass transformer cabinet
with manual bypass 40 kVA
1000007888.020
10009757

GZ1_1 +MBC1/1.3
GZ1_2 +MBC1/1.3
GZ1_3 +MBC1/1.3

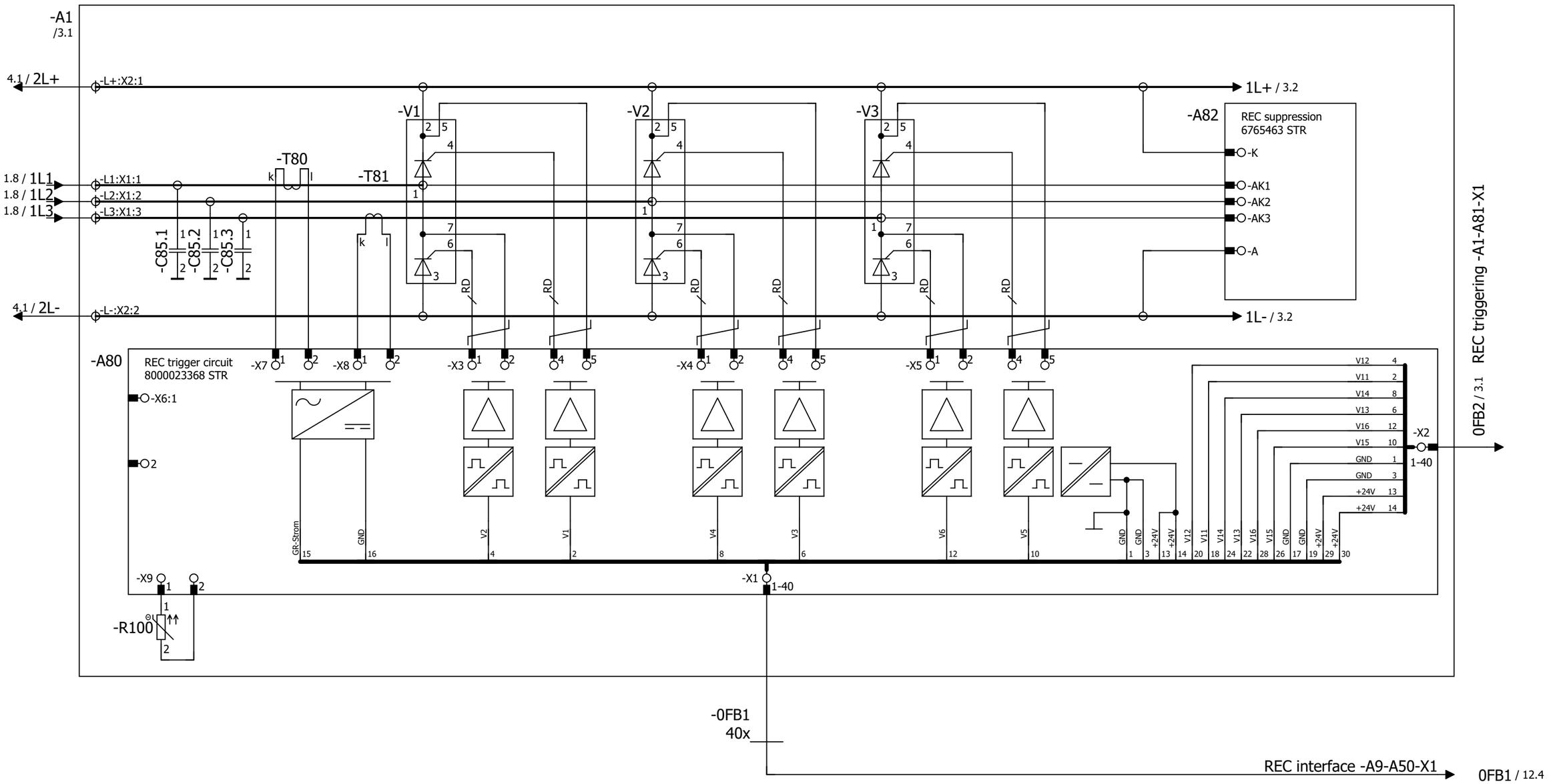
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				Date	14.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Rectifier input Protect 8.33 40-400-210-400 Circuit diagram	1000007888.010 10009756	1000007888_010 en	= / + UPS1 / & EFS
				Editor	EEC						A3 sheet 1
				Checked	Ch.Peck						sheets 23
Stat	Alteration	Date	Name	Norm							

Power section rectifier

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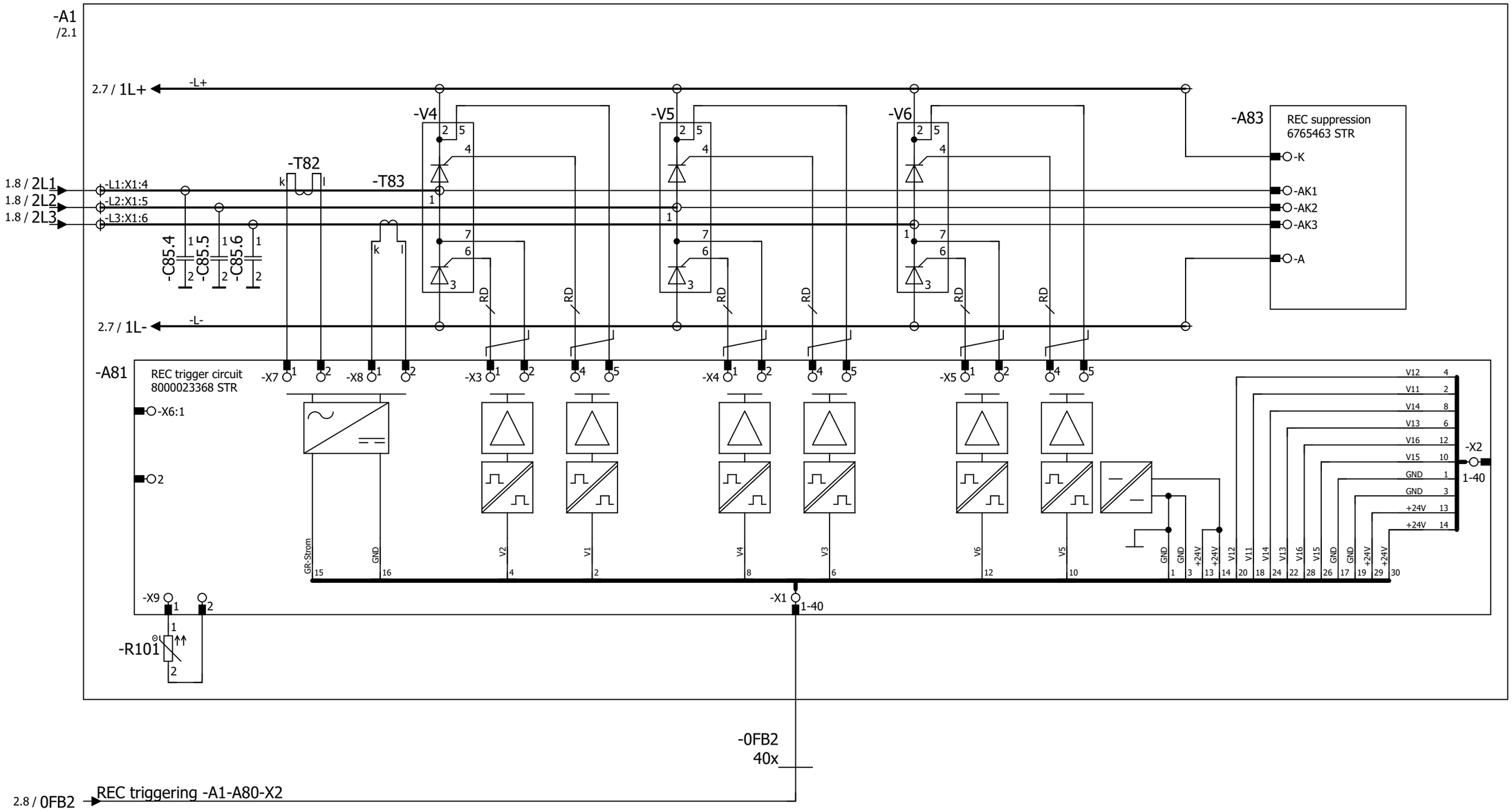
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				Date	14.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Power section rectifier Protect 8.33 40-400-210-400 Circuit diagram			=
				Editor	EEC						+ UPS1
				Checked	Ch.Peck				1000007888.010 10009756	1000007888_010 en	& EFS
Stat	Alteration	Date	Name	Norm							A3 sheet 2 / sheets 23

Power section rectifier

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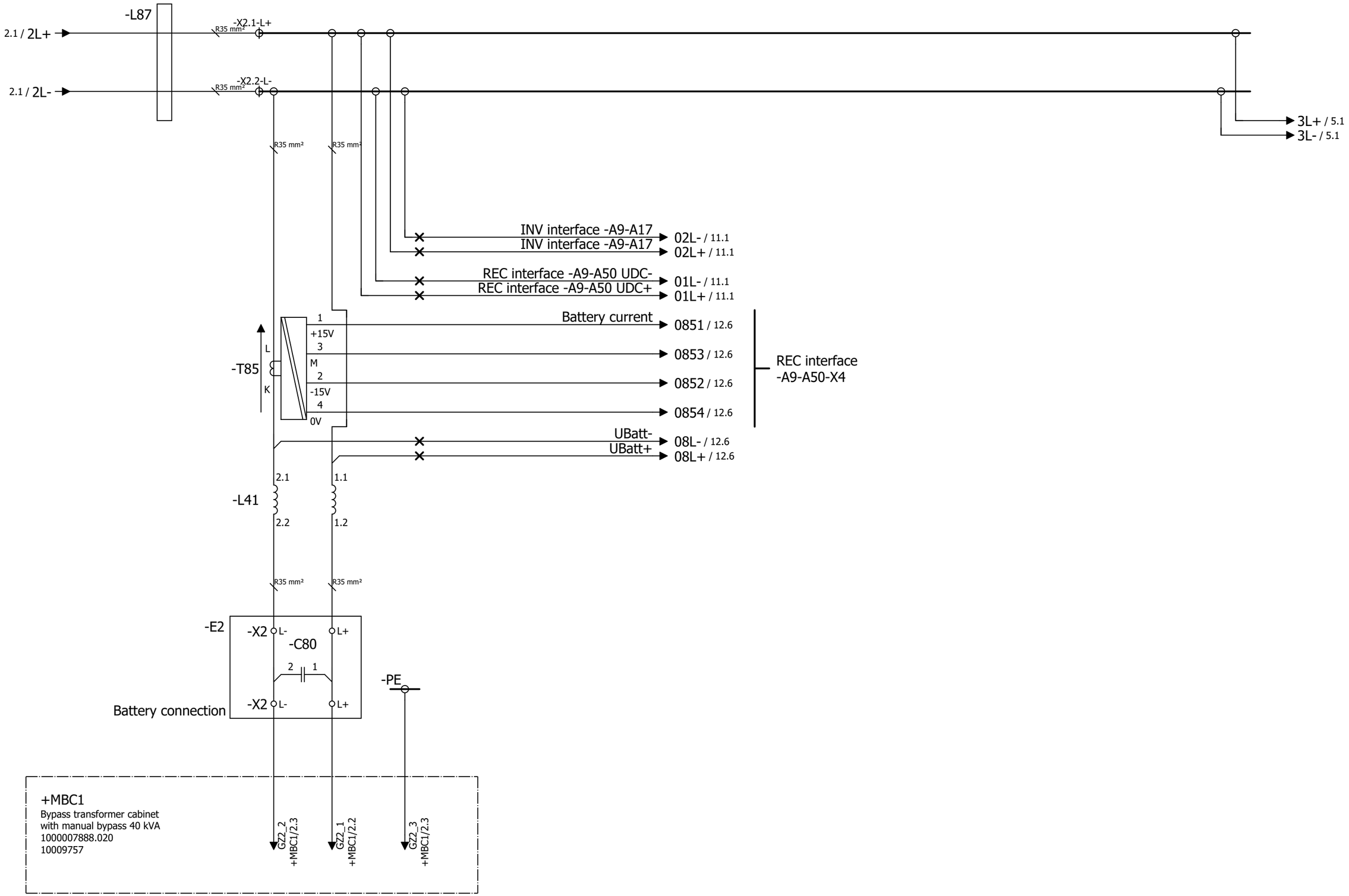
				Date	14.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Power section rectifier Protect 8.33 40-400-210-400 Circuit diagram
				Editor	EEC			
				Checked	Ch.Peck			
Stat	Alteration	Date	Name	Norm				

			=	
			+ UPS1	
1000007888.010 10009756	1000007888_010 en		& EFS	A3
			sheet	3
			sheets	23

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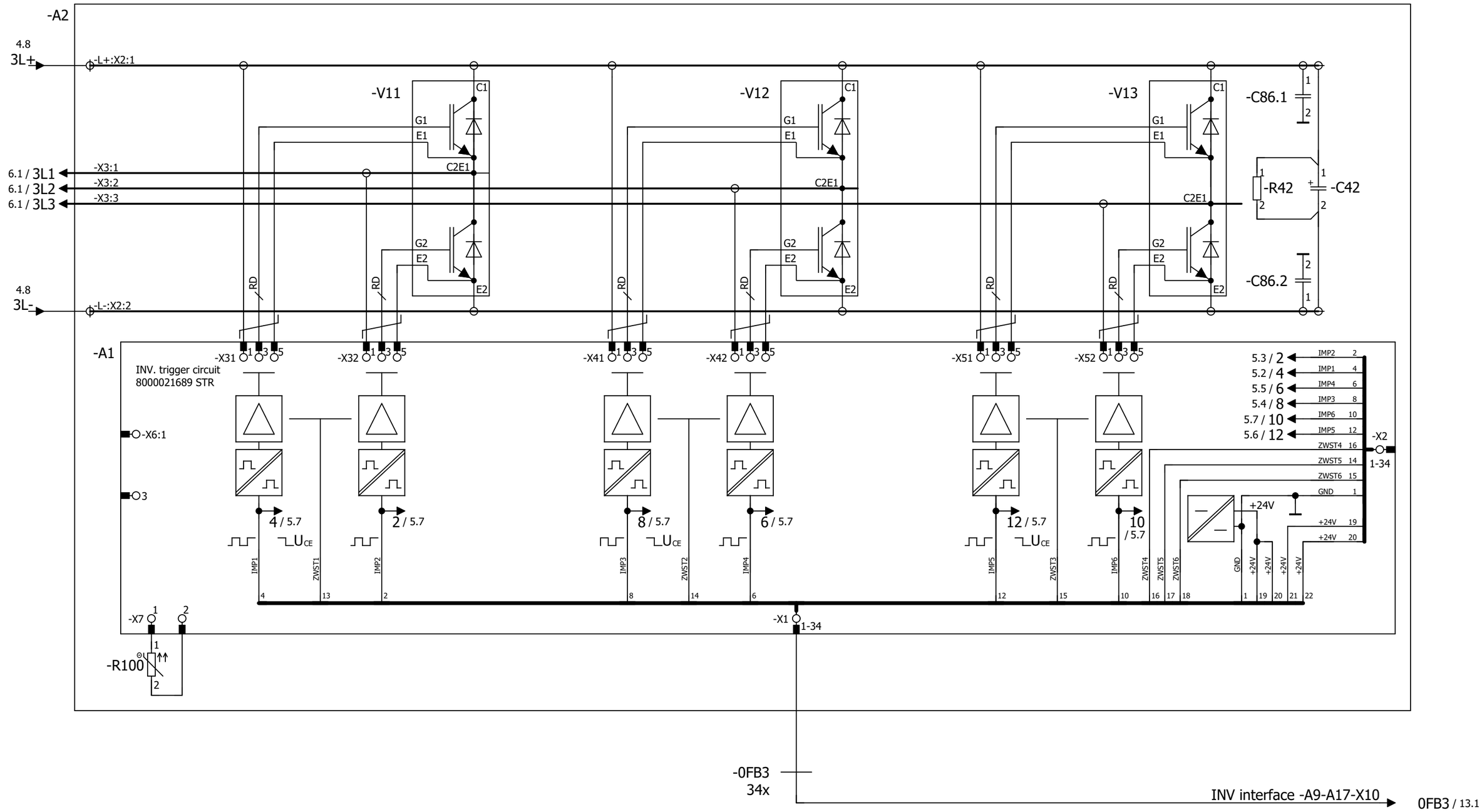
Power section rectifier
Battery connection



1000007888_010

				Date	14.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Battery connection Protect 8.33 40-400-210-400 Circuit diagram		=
				Editor	EEC					+ UPS1
				Checked	Ch.Peck				1000007888.010 10009756	& EFS
Stat	Alteration	Date	Name	Norm					1000007888_010 en	A3 sheet 4 / sheets 23

Power section inverter



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				Editor	EEC								
				Checked	Ch.Peck								
Stat	Alteration	Date	Name	Norm									

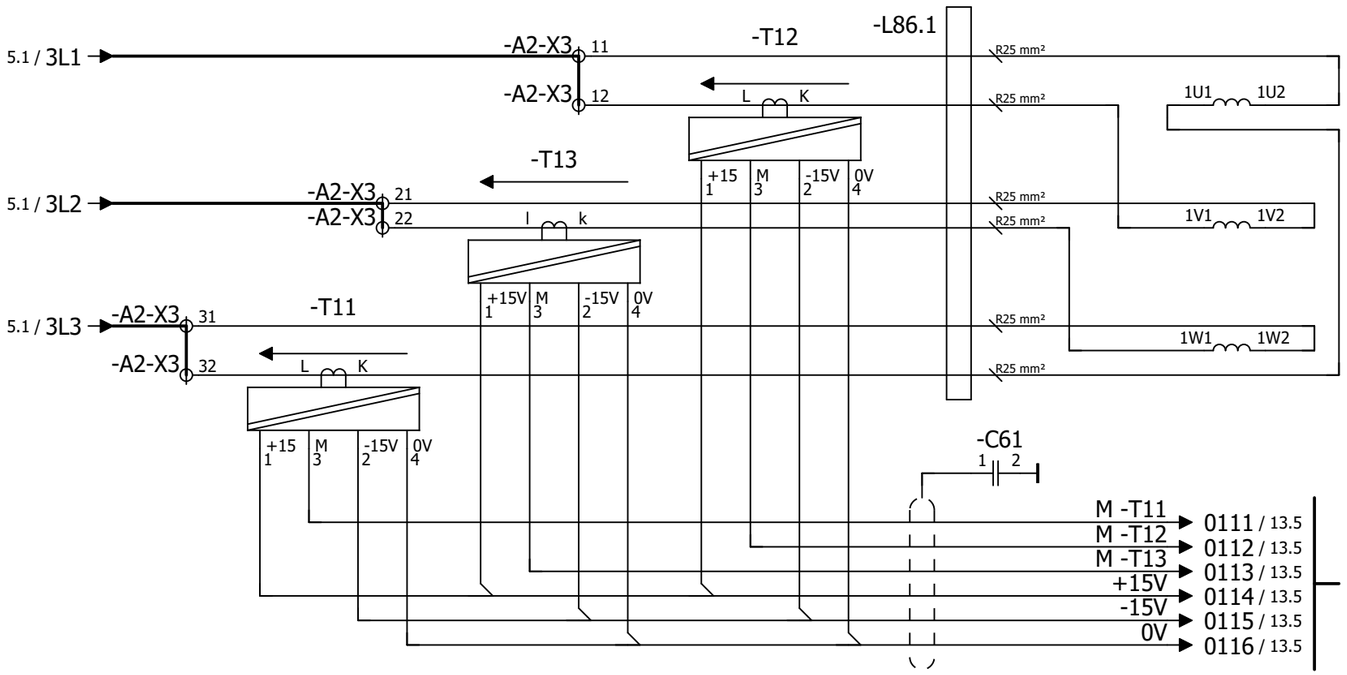
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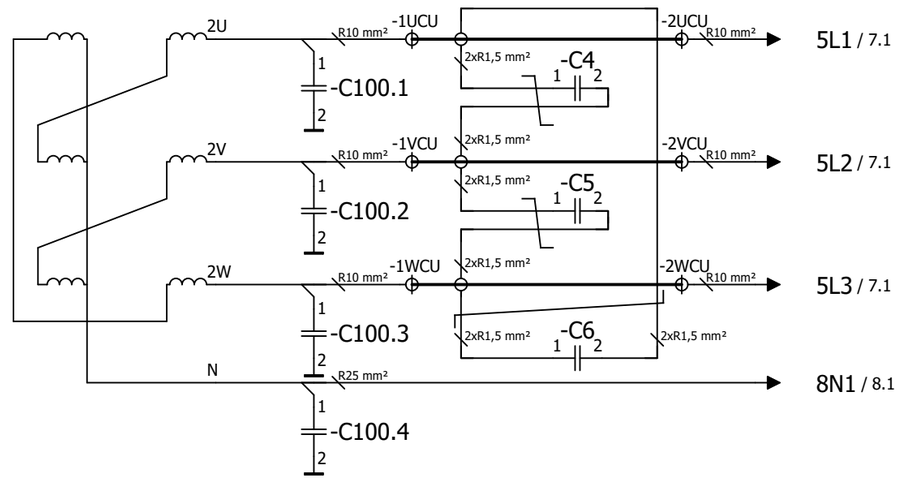
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Power section inverter

Measuring INV current dynamic



-T1



				Date	14.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Inverter output Protect 8.33 40-400-210-400 Circuit diagram	1000007888.010 10009756	1000007888_010 en	=	
				Editor	EEC						+ UPS1	
				Checked	Ch.Peck						& EFS	A3 sheet 6
Stat	Alteration	Date	Name	Norm								sheets 23

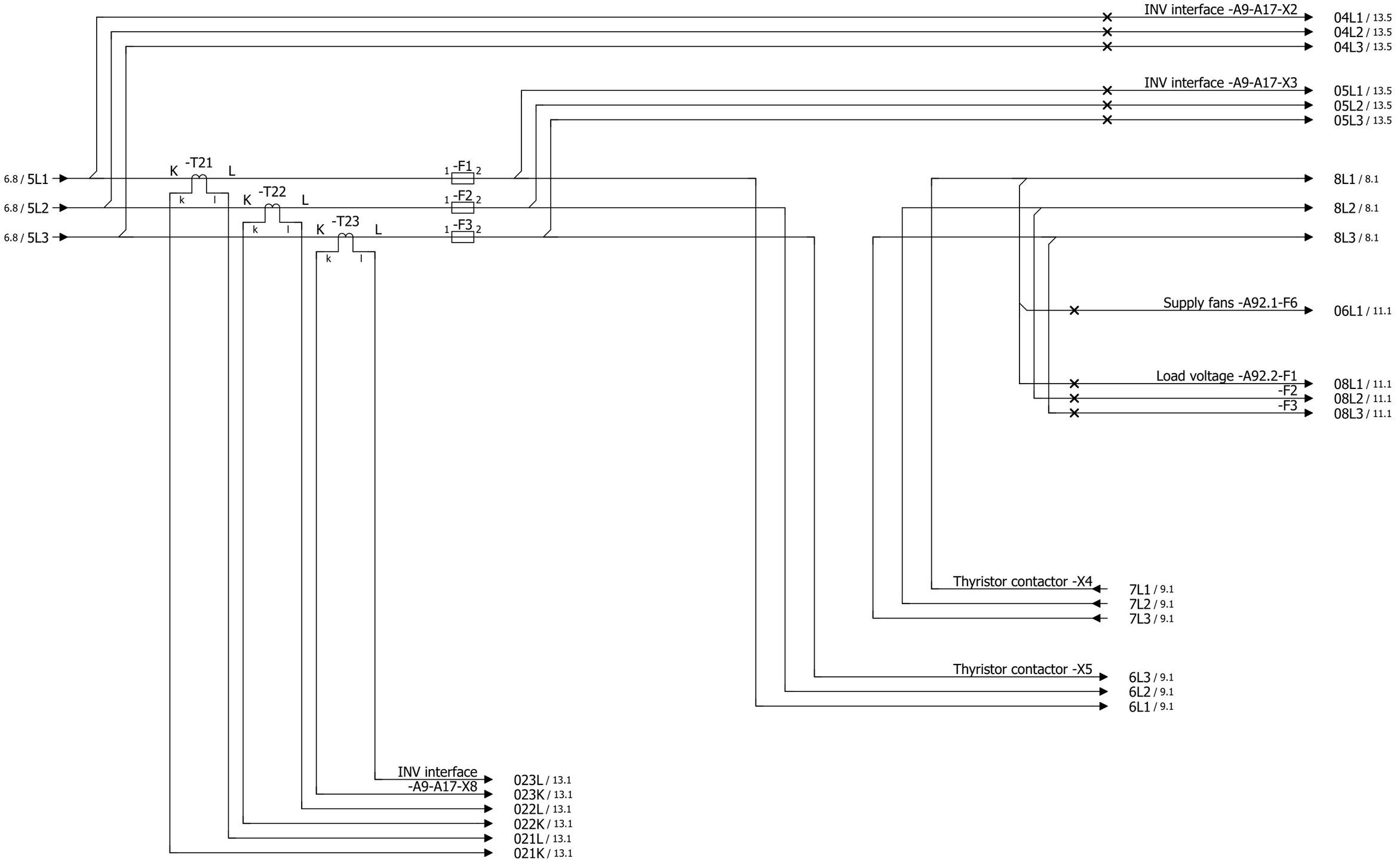
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Power section inverter

Measurement INV current static

Output fuse



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				Editor	EEC			
				Checked	Ch.Peck			
Stat	Alteration	Date	Name	Norm				

		=			
		+ UPS1			
1000007888.010 10009756	1000007888_010 en	& EFS	A3	sheet	7
				sheets	23

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Power section inverter

Parallel preventive choke coil

7.8 / 8L1
7.8 / 8L2
7.8 / 8L3
6.8 / 8N1

-L11 -L12 -L13

R10 mm² R25 mm² 2xR35 mm²

-A105
-C56 -C57 -C58
-X1 -X2 -X3 -X4

SBS Output
10L1 / 10.1
10L2 / 10.1
10L3 / 10.1

SBS Input
9L1 / 10.1
9L2 / 10.1
9L3 / 10.1

fan neutral conductor
0451N1 / 17.1

neutral conductor
04N1 / 13.5
-A9

-E3
-X3 U V W N
-A4
-X4
EMI capacitor 4-pole 8000022634 STR
-C4 -C5 -C1 -C6 -C2 -C7 -C3 -C8 -C9 -C10
-X1 -X2 -X3

-L93

-A3
-X4
EMI capacitor 4-pole 8000022634 STR
-C4 -C5 -C1 -C6 -C2 -C7 -C3 -C8 -C9 -C10
-X1 -X2 -X3

Load
400V;3/N/PE~50Hz
-X3 U V W N

-PE

-E4
-X4 U V W N
-A4
-X4
EMI capacitor 4-pole 8000022634 STR
-C4 -C5 -C1 -C6 -C2 -C7 -C3 -C8 -C9 -C10
-X1 -X2 -X3

-L94

-A3
-X4
EMI capacitor 4-pole 8000022634 STR
-C4 -C5 -C1 -C6 -C2 -C7 -C3 -C8 -C9 -C10
-X1 -X2 -X3

Mains
400V;3/N/PE~50Hz
-X4 U V W N

+MBC1
Bypass transformer cabinet
with manual bypass 40 kVA
1000007888.020
10009757

GZ3_1 +MBC1/6.3
GZ3_2 +MBC1/6.3
GZ3_3 +MBC1/6.3
GZ3_4 +MBC1/6.3

GZ4_1 +MBC1/5.3
GZ4_2 +MBC1/5.3
GZ4_3 +MBC1/5.3
GZ4_4 +MBC1/5.4

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Load output / SBS circuit
Protect 8.33 40-400-210-400

Circuit diagram

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1000007888_010 en

= + UPS1 & EFS

A3

sheet 8
sheets 23

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Power section inverter
Inverter output contactor

-A4

-A37 SBS suppression 8000028996 STR

-A3 -K3 -AK3 -A2 -K2 -AK2 -A1 -K1 -AK1

-V31

-X4:1AC
-X4:1
-X4:1K

A K AK G2 K2 K1 G1

-V33

-X4:2AC
-X4:2
-X4:2K

-V35

-X4:3AC
-X4:3
-X4:3K

RD

-A36 SBS trigger circuit 8000028563 STR

-X2 -X3 -X4 -X5:1 -X5:2

GND EUE_EIN GND GND +24V +24V 1 2 3 4 5 6 7 8 9 10

-X6 1 2

-X1 1-10

-R100

-0FB10
10x

-X6 5 6 3 4 1 2

-X5:3 -X5:2 -X5:1

7.7 / 7L1
7.7 / 7L2
7.7 / 7L3

7.7 / 6L3
7.7 / 6L2
7.7 / 6L1

INV interface -A9-A17-X1 → 0FB10 / 13.1

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Power section SBS

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-A3

-A37 SBS suppression 8000028996 STR

-A3 -K3 -AK3 -A2 -K2 -AK2 -A1 -K1 -AK1

SBS mains voltage -A92.2-F6 → 010L1 / 11.1
-A92.2-F7 → 010L2 / 11.1
-A92.2-F8 → 010L3 / 11.1

8.8 / 9L1 SBS mains
8.8 / 9L2 SBS mains
8.8 / 9L3 SBS mains

-V31 -V33 -V35

-X4:1A -X4:1 -X4:1K
-X4:2A -X4:2 -X4:2K
-X4:3A -X4:3 -X4:3K

A K AK G2 K2 K1 G1 RD

-X2 -X3 -X4

-A36 SBS trigger circuit 8000028563 STR

-X5:1
2

GND EUE_EIN GND GND +24V +24V
1 2 3 4 5 6 7 8 9 10

-X6 1 2
-X1 1-10

-R100

SBS interface -A9-A16-X1 → 0FB9 / 14.3

-X6 5
-X6 6
-X6 3
-X6 4
-X6 1
-X6 2

8.8 / 10L3 UPS Output
8.8 / 10L2
8.8 / 10L1

-X5:3
-X5:2
-X5:1

SBS interface -A9-A16-X4 → 03151L / 14.3
-A9-A16-X4 → 03151K / 14.3
-A9-A16-X4 → 03352L / 14.3
-A9-A16-X4 → 03352K / 14.3
-A9-A16-X4 → 03553L / 14.3
-A9-A16-X4 → 03553K / 14.3

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Power section SBS
Protect 8.33 40-400-210-400
Circuit diagram

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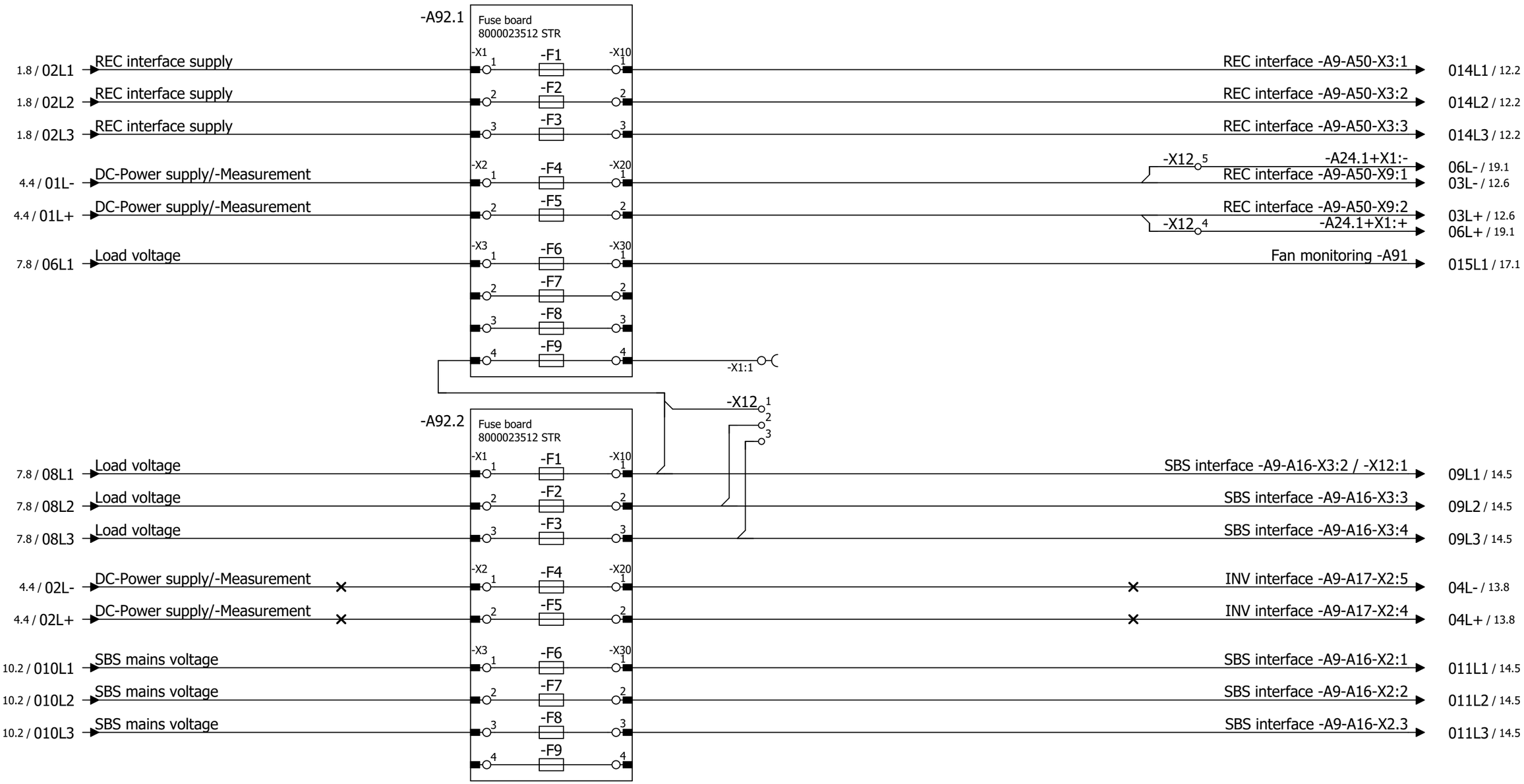
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Fuse boards

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Rectifier control

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-A9
/16.1

4.4 / 0854
4.4 / 0851
4.4 / 0853
4.4 / 0852
Battery current transformer -T85

4.4 / 08L+
4.4 / 08L-
UBatt+
UBatt-

11.8 / 03L+
11.8 / 03L-
UIC+ A92.1-F5
UIC- A92.1-F4

1.8 / 01L3
1.8 / 01L2
1.8 / 01L1
-Q1 REC input voltage

11.8 / 014L3
11.8 / 014L2
11.8 / 014L1
-T40 sec. supply REC

2.8 / 0FB1
REC trigger circuit -A1-A80-X1

-A50
/16.2
REC interface
8000022025 STR

-X3 1 2 3
-X5 7 8
-X1 1-40
-X2 1 3 5
-X9 1 2 3 4
-X4 2 3 1 4
-15V +15V

GND V1 GND V2 V3 V4 V5 V6 +24V +24V GND V11 GND V12 V13 V14 V15 V16 +24V +24V REC current
+24V
+24V

-R204
REC current stack A1
-R206
REC current stack A2

-X11 1-50
-A50X11__50x
-X12 1-50
-A50X12__50x

-A1
REC control
8000014119 STR

-X19 1 2 3
-X15 1 4
-X8 1 2 3
-X5 3 4 +24V DC
-X8 4 5 6
-X5 5 6

-X130 1 2
-X12 10 11 15
-Q3
/1.4
96 98
95
-Q1 C1 C2

BK R1,5 mm²
-C711 220000µF
-C712 220000µF
BK R2,5 mm²
BK R2,5 mm²
BK R1,5 mm²
0V
-X15 1 1
-X15 2 2 (+) (-) 3
*1

+MBC1
Bypass transformer cabinet
with manual bypass 40 kVA
1000007888.020
10009757

GZ130_1 +MBC1/2.6
GZ130_2 +MBC1/2.6

GZ15_2 +MBC1/2.4
GZ15_3 +MBC1/2.4

*1 Attention! In the event of battery undervoltage < 130 V, the UPS automatically switches off battery isolator Q2.
If this happens, switch X15:3 must be switched into the open position (undervoltage trip blocked).
For restart, please refer to the chapter in the UPS operating instructions (charging the DC link capacitors).
Unlock the tripped switch Q2 by switching to open position.
After charging the DC link capacitors, switch on Q2.
Attention! When the battery voltage reaches > 200 V, switch X15:3 must be switched back to the closed position.

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Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Rectifier control
Protect 8.33 40-400-210-400

Circuit diagram

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Inverter control

INV current static

7.3 / 023L Transformer -T23
7.3 / 023K
7.3 / 022L Transformer -T22
7.3 / 022K
7.3 / 021L Transformer -T21
7.3 / 021K

INV. trigger circuit
-A2-A1-X1
5.8 / 0FB3

Trigger circuit
-A4-A36-X1
9.7 / 0FB10

INV current dynamic

7.8 / 05L1 INV output voltage reference
7.8 / 05L2
7.8 / 05L3
8.8 / 04N1 neutral conductor → N → 05N1 / 14.5
7.8 / 04L1 INV output voltage
7.8 / 04L2
7.8 / 04L3

6.5 / 0116 Transformer -T11...-T13
6.5 / 0115
6.5 / 0113
6.5 / 0112
6.5 / 0111
6.5 / 0114

11.8 / 04L+ UIC+
11.8 / 04L- UIC-

-A9
/16.1

-A17
/16.3
INV interface
8000022441 STR

-X1 1-10: GND, SBS_ON, GND, GND, +24V, +24V → +24V
-X10 1-34: IMP1, IMP2, IMP5, IMP6, ZWST1, ZWST3, +24V, +24V, GND → +24V
-X4 1-6, -X8 6
-X13 1-4: -15V, +15V
-X20 1-6: +15V, -15V
-X19 1-6: +15V, -15V
-X2 1W, 2V, 3U, -X3 1N, 2U, 3V, 4W
-X2 5, 4

-R203 -R205 -R207
-R204 -R206 -R208
INV current static

-S201
-S202
-S203
INV current dynamic

-X11 1-50: 48, 14, 13, 12, 17, 21, 23, 49
-X12 1-50: 27, 28, 21, 22, 19, 20, 23, 48, 46, 50, 47, 45, 49, 32, 29, 30, 31, 39, 38, 37, 1, 2

-A17X11 50x
-A17X12 50x

-A1
INV control
8000042636 STR

-X11 1-50: 48, 14, 13, 12, 17, 21, 23, 49
-X12 1-50: 27, 28, 21, 22, 19, 20, 23, 48, 46, 50, 47, 45, 49, 32, 29, 30, 31, 39, 38, 37, 1, 2

-X15 1, 4
-X5 1, 2 (+)
-X5 5, 6 (+)
-X8 8, 7
-X5 3, 4 (+)
-X8 1, 2

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Control SBS

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-A9
/16.1

Transformer -T35
10.4 / 03553L
10.4 / 03553K
Transformer -T33
10.4 / 03352L
10.4 / 03352K
Transformer -T31
10.4 / 03151L
10.4 / 03151K

Load voltage
11.8 / 09L1
11.8 / 09L2
11.8 / 09L3

neutral conductor
13.8 / 05N1
-X1:3
-X12 6

SBS mains voltage
11.8 / 011L1
11.8 / 011L2
11.8 / 011L3

SBS trigger circuit
-A3-A36-X1
10.2 / 0FB9

-L62

-A16
/16.4
SBS interface
8000022378 STR

-X1 1-10
GND SBS_ON GND GND +24V +24V
+24V

-X4 1 2 3 4 5 6

-X2 1U 2V 3W
-X3 1N 2U 3V 4W

SBS current

-X12
12
-X8
7
7
8
5
4
9
6
-X18
1
-R120
1
2
2

-R201 -R203 -R205
-R202 -R204 -R206

15 16 26 17 21 29 30 27 45 46 35 36 33 41 42 39

-X11 1-50
-A16X11 50x
-X12 1-50
-A16X12 50x

-A1
SBS control
8000008845 STR
-X11 1-50
-X12 1-50
15 16 26 17 21 29 30 27 45 46 35 36 33 41 42 39

-X15 1 2 3 +24V 4 5

Fan control -A92.1-X6
091.11 / 17.7
091.12 / 17.7
091.13 / 17.7
091.14 / 17.7
091.15 / 17.7

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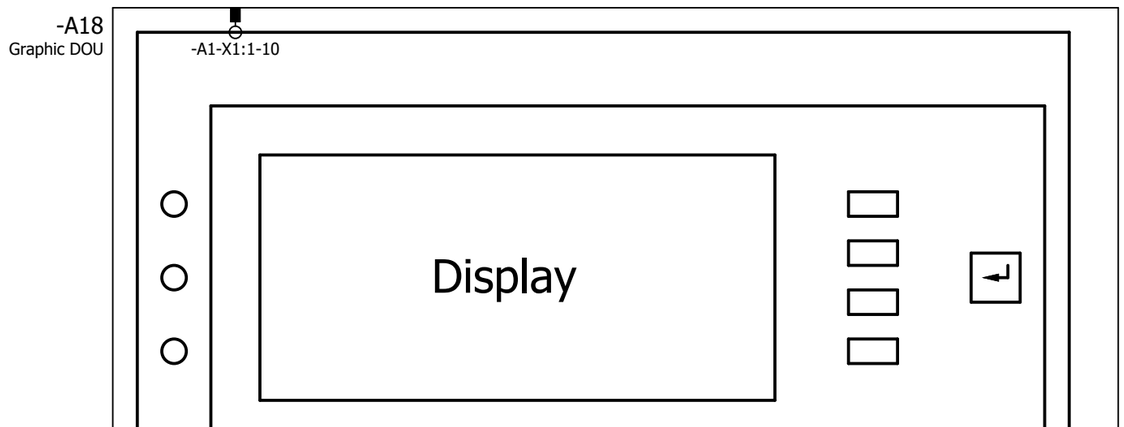
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Control

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DOU-CAN

A / 16.1

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Control

+UPS2
Protect 8.33 40-400-210-400
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GZ20_3
+UPS2/16.6

GZ20_5
+UPS2/16.7

INV
-CAN

INV
-sync

-A9
/12.1
/13.1
/14.2
/20.1
/21.1
/22.1

-A50
/12.1
REC interface
8000022025 STR

-X6 1-10
-X7 1-16

-A17
/13.1
INV interface
8000022441 STR

-X6 1-10
-X7 1-16

-A16
/14.2
SBS interface
8000022378 STR

-X6 1-10
-X7 1-16

-A20
Parallel Adapter
8000023378 STR

-X3 1-3
-X4 1-3
-X5 1-4
-X6 1-2

-X1 1-16
-X2 1-16
-X11 1-10
-X12 1-10
-X13 1-10
-X14 1-10

Parallel CAN INV

Parallel CAN REC

15.8 / A

DOU-CAN

A / 20.1

L / 19.1

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Fan control/monitoring

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11.8 / 015L1 → 016L1 / 18.1

8.8 / 0451N1 → 0452N1 / 18.1

-A91.2-X6 → 091.21 / 18.7, 091.22 / 18.7, 091.23 / 18.7, 091.24 / 18.7, 091.25 / 18.7

-A91.1 Fan control 8000022841 STR

-X5: 1, 2, 3

-R5, -C5

Logical evaluation fan fault

-S1, -S2

= 1

-X7: 1, 2, 3, 4, 5

Fan speed

+24V

-R50 -R51 -R60 -R61 -R70 -R71 -R80 -R81

P1 P2 P3 P4 P5 P6 P7 P8

-R1 PTC, -R2 PTC, -R3 PTC, -R4 PTC

-X1, -X2, -X3, -X4: 2, 1

-X6: 1, 2, 3, 4, 5

-C31, -C32, -C33, -C34

-X91, -X92, -X93, -X94: 1, 2, 3

-M1, -M2, -M3, -M4: M 1~, N, L, PE

14.6 / 091.11 → Fan speed

14.6 / 091.12 → +24V

14.6 / 091.13

14.6 / 091.14

14.6 / 091.15

SBS interface -A9-A16-X15

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Fan control/monitoring

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17.8 / 016L1

17.8 / 0452N1

-A91.2
Fan control
8000022841 STR

-X5 1 2 3

-R5
-C5

-S1
-S2

= 1

Logical evaluation
fan fault

-X7 1 2 3 4 5

P2 P4 P6 P8
-R50 -R51 -R60 -R61 -R70 -R71 -R80 -R81
P1 P3 P5 P7

-R1 PTC
-R2 PTC
-R3 PTC
-R4 PTC

-X1 2 1
-X2 2 1
-X3 2 1
-X4 2 1

-X6 1 2 3 4 5

Fan speed
+24V

-C35
-C36

-X95 2 3 1
-X96 2 3 1

N L

-M5 M 1~ PE
-M6 M 1~ PE

17.8 / 091.21
17.8 / 091.22
17.8 / 091.23
17.8 / 091.24
17.8 / 091.25
-A92.1-X7

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AEG POWER SOLUTIONS

Fan control/monitoring
Protect 8.33 40-400-210-400

Circuit diagram

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Control

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+MBC1
Bypass transformer cabinet
with manual bypass 40 kVA
1000007888.020
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GZ91_1
+MBC1/2.5

-F91
G
F3,15A
1
2

11.8 / 06L+

-A24.1
Battery charge monitoring
BLÜ-PRO
(Option)

-X1 +
M
-
-
-
-
0 ... 5V
-X1 -
-X3 1-16
-X4 1-10

16.8 / L

11.8 / 06L-

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

battery charging circuit monitoring
Protect 8.33 40-400-210-400

Circuit diagram

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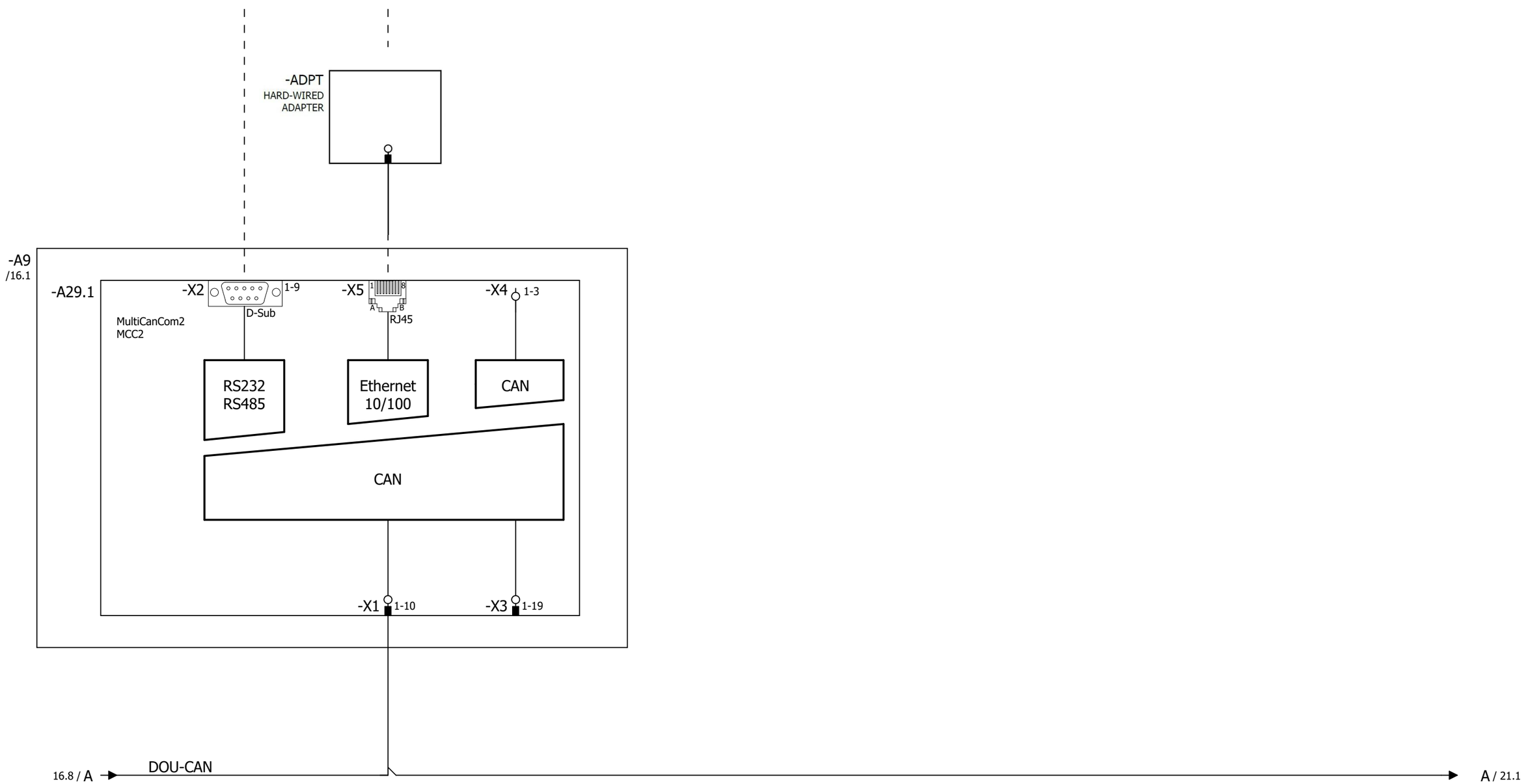
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Control

SNMP adapter
CompuWatch
Service Tools
Modbus

Modbus



16.8 / A → DOU-CAN → A / 21.1

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Remote signaling

CAN Service

Configuration remote signals
see techn. data sheet

INV remote off

Common fault

Inverter operation

SBS operation

REC fault

REC mains fault

Battery low

-A9
/16.1

-A12
Remote signaling
8000062777 STR

-X6 1-10

-X5 1 2

-X4 1 2 3

-X3 1 2 3 4 5 6 7 8 9 10 11 12

-K25 -K21 -K22 -K23 -K24

-X1 1-10

-X2 1-16

20.8 / A

B / 22.1

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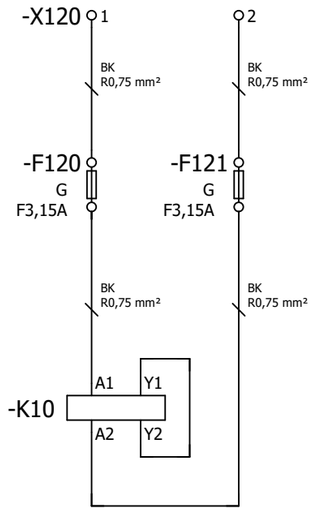
Remote signaling

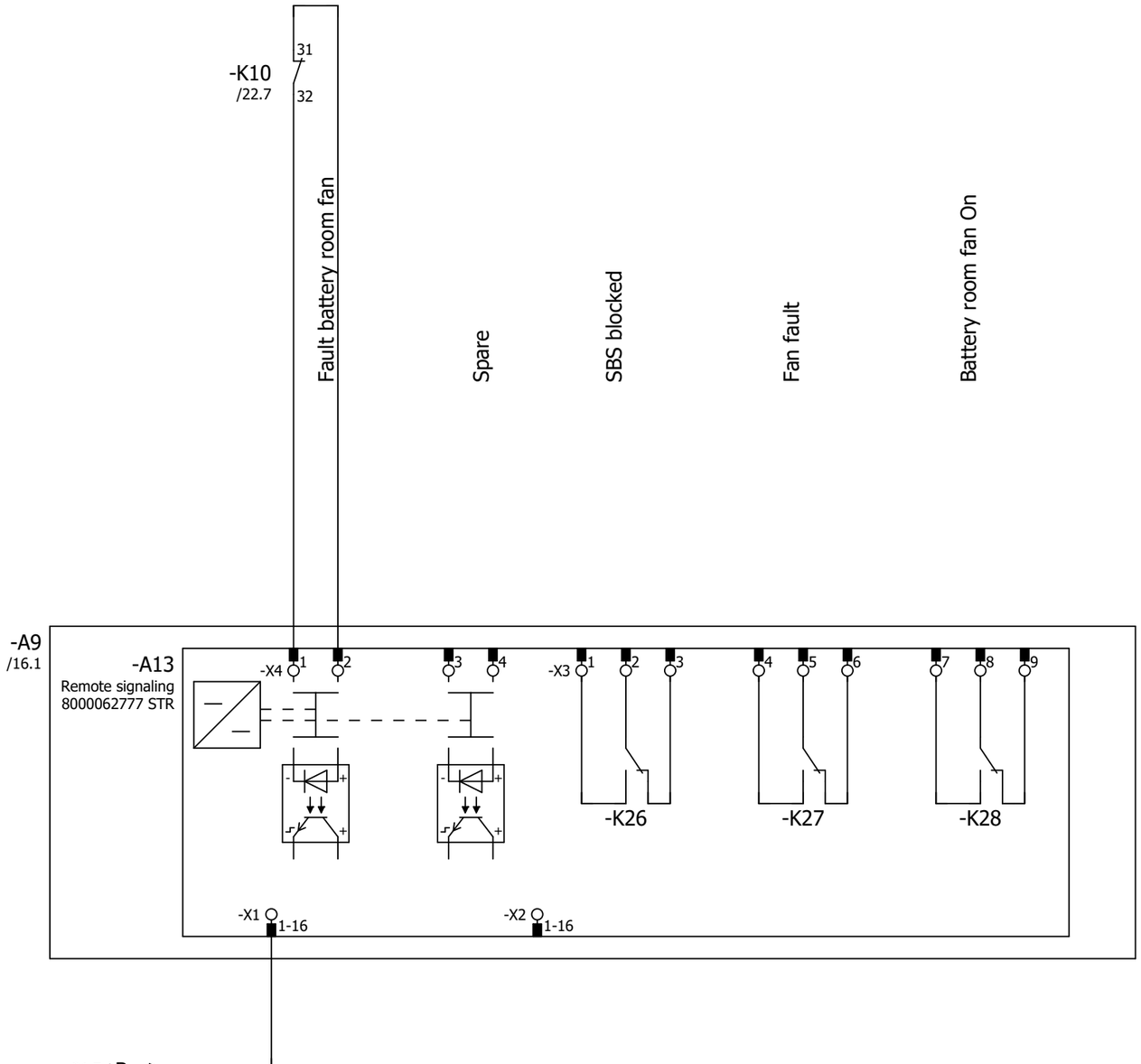
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Configuration remote signals see techn. data sheet

24V DC is permanently present in fault-free operation





PXC.2981020_PSR-SCP- 24DC/ESP4/2X1/1X2

13 — 14
23 — 24
31 — 32 /22.2

1000007888_010

				Date	28.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Remote signaling Protect 8.33 40-400-210-400		=
				Editor	Beckschäfer					+ UPS1
				Checked	Ch.Peck					& EFS
Stat	Alteration	Date	Name	Norm				Circuit diagram	1000007888.010 10009756	1000007888_010 en

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+MBC1
Bypass transformer cabinet
with manual bypass 40 kVA
1000007888.020
10009757

GZ13_1
+MBC1/17.2

GZ13_2
+MBC1/17.3

Control cabinet heating
Mains
110-250V/N/PE~50/60Hz

back-up fuse
gG 10A

BK
R1,5 mm²

BK
R1,5 mm²

-X13 U U N N PE PE

BK
0,75 mm²

-F100 1
G
T6,3A 2

BK
0,75 mm²

L
-F85
I 3 2

BK
0,75 mm²

-A85 -X1 3 2
-R1

-X14 U U N N

BK
0,75 mm²

-F110 1
G
T6,3A 2

BK
0,75 mm²

BK
0,75 mm²

-X114 U N

-W100
H05VV
2x1 mm²
3 m

L N

-H1
Enclosure light

1000007888_010

				Date	14.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	external connection Protect 8.33 40-400-210-400 Circuit diagram			=
				Editor	EEC						+ UPS1
				Checked	Ch.Peck				1000007888.010 10009756	1000007888_010 en	& EFS
Stat	Alteration	Date	Name	Norm							A3 sheet 23 / sheets 23

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Terminal diagram

terminal

=+UPS1-A9-A12-X3

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1						+UPS1&EFS/21.5
				2						+UPS1&EFS/21.5
				3						+UPS1&EFS/21.5
				4						+UPS1&EFS/21.5
				5						+UPS1&EFS/21.6
				6						+UPS1&EFS/21.6
				7						+UPS1&EFS/21.6
				8						+UPS1&EFS/21.6
				9						+UPS1&EFS/21.6
				10						+UPS1&EFS/21.7
				11						+UPS1&EFS/21.7
				12						+UPS1&EFS/21.7

1000007888_010

				Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Terminal diagram =+UPS1-A9-A12-X3 Protect 8.33 40-400-210-400 Terminal diagram		=	
				Editor	Beckschäfer					+ UPS1	
				Checked	Ch.Peck				1000007888_010 en	& EMA	A3 sheet 1 / sheets 23
Stat	Alteration	Date	Name	Norm							

CAE EPLAN Electric P8

Terminal diagram

terminal =+UPS1-A9-A12-X4

Cable name / Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name / Cable type	Position / Page
			1					+UPS1&EFS/21.4
			2					+UPS1&EFS/21.4
			3					+UPS1&EFS/21.4

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Terminal diagram

terminal

=+UPS1-A9-A12-X5

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1						+UPS1&EFS/21.3
				2						+UPS1&EFS/21.3

			Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm
			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Norm	Name	

AEG POWER SOLUTIONS

Terminal diagram =+UPS1-A9-A12-X5
Protect 8.33 40-400-210-400

Terminal diagram

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+ UPS1
& EMA

A3

sheet 3
sheets 23

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Terminal diagram

terminal

=+UPS1-A9-A12-X6

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable type	Cable name	Position / Page
				1-10		-A9-A12-X1				+UPS1&EFS/21.2

			Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm
			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS1-A9-A12-X6
Protect 8.33 40-400-210-400

Terminal diagram

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+ UPS1
& EMA

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sheets 23

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Terminal diagram

terminal

=+UPS1-A9-A29.1-X2

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1-9						+UPS1&EFS/20.2

	Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Terminal diagram =+UPS1-A9-A29.1-X2 Protect 8.33 40-400-210-400 Terminal diagram
	Editor	Beckschäfer			
	Checked	Ch.Peck			
Stat Alteration	Date	Name	Norm		

=			
+ UPS1			
& EMA	1000007888_010 en	A3	sheet 5
			sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS1-A9-A29.1-X4

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1-3						+UPS1&EFS/20.3

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			Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm
			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS1-A9-A29.1-X4
Protect 8.33 40-400-210-400

Terminal diagram

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+ UPS1
& EMA

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sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS1-A9-A29.1-X5

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1-8						+UPS1&EFS/20.3

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		Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS
		Editor	Beckschäfer		
		Checked	Ch.Peck		
Stat	Alteration Date Name	Norm			

Terminal diagram =+UPS1-A9-A29.1-X5
Protect 8.33 40-400-210-400

Terminal diagram

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sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS1-A20-X3

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+UPS2-A20-X3	1-3	1-3						+UPS1&EFS/16.6

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Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+UPS1-A20-X3
Protect 8.33 40-400-210-400

Terminal diagram

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& EMA

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sheet 8
sheets 23

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Terminal diagram

terminal

=+UPS1-A20-X4

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1-3						+UPS1&EFS/16.7

		Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS
		Editor	Beckschäfer		
		Checked	Ch.Peck		
Stat	Alteration Date Name	Norm			

Terminal diagram =+UPS1-A20-X4
Protect 8.33 40-400-210-400

Terminal diagram

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= | + UPS1 | & EMA

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sheets 23

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Terminal diagram

terminal

=+UPS1-A20-X5

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+UPS2-A20-X5	1-4	1-4						+UPS1&EFS/16.7

		Date	03.06.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS
		Editor	Beckschäfer		
		Checked	Ch.Peck		
Stat	Alteration Date Name	Norm			

Terminal diagram =+UPS1-A20-X5
Protect 8.33 40-400-210-400

Terminal diagram

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sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS1-A20-X6

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1-2						+UPS1&EFS/16.7

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			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

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Terminal diagram =+UPS1-A20-X6
Protect 8.33 40-400-210-400

Terminal diagram

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Terminal diagram

terminal

=+UPS1-E1-X1

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U		-E1-X1	U			+UPS1&EFS/1.2
						-Q1	2			
		+MBC1-X1	2U	U		-E1-X1	U			+UPS1&EFS/1.2
				V		-E1-X1	V			+UPS1&EFS/1.2
						-Q1	4			
		+MBC1-X1	2V	V		-E1-X1	V			+UPS1&EFS/1.2
				W		-E1-X1	W			+UPS1&EFS/1.2
						-Q1	6			
		+MBC1-X1	2W	W		-E1-X1	W			+UPS1&EFS/1.2

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Terminal diagram

terminal

=+UPS1-E2-X2

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				L+		-L41	1.2			+UPS1&EFS/4.3
		+MBC1-X2	1L+	L+						+UPS1&EFS/4.3
				L-		-L41	2.2			+UPS1&EFS/4.2
		+MBC1-X2	1L-	L-						+UPS1&EFS/4.2

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Terminal diagram

terminal
=+UPS1-E3-X3

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U		-E3-X3	U			+UPS1&EFS/8.2
						-L11	2			
		+MBC1-X5	1U	U		-E3-X3	U			+UPS1&EFS/8.2
				V		-E3-X3	V			+UPS1&EFS/8.2
						-L12	2			
		+MBC1-X5	1V	V		-E3-X3	V			+UPS1&EFS/8.2
				W		-E3-X3	W			+UPS1&EFS/8.2
						-L13	2			
		+MBC1-X5	1W	W		-E3-X3	W			+UPS1&EFS/8.2
				N		-E3-X3	N			+UPS1&EFS/8.3
		+MBC1-X5	1N	N		-E3-X3	N			+UPS1&EFS/8.3
		+MBC1-X5	1N	N		-E3-X3	N			+UPS1&EFS/8.3

			Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm
			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

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Terminal diagram =+UPS1-E3-X3
Protect 8.33 40-400-210-400

Terminal diagram

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Terminal diagram

terminal
=+UPS1-E4-X4

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U		-E4-X4	U			+UPS1&EFS/8.6
						-A3-X4	1			
		+MBC1-X4	1U	U		-E4-X4	U			+UPS1&EFS/8.6
				V		-E4-X4	V			+UPS1&EFS/8.6
						-A3-X4	2			
		+MBC1-X4	1V	V		-E4-X4	V			+UPS1&EFS/8.6
				W		-E4-X4	W			+UPS1&EFS/8.6
						-A3-X4	3			
		+MBC1-X4	1W	W		-E4-X4	W			+UPS1&EFS/8.6
				N		-E4-X4	N			+UPS1&EFS/8.6
		+MBC1-X4	1N	N		-E4-X4	N			+UPS1&EFS/8.6
		+MBC1-X4	1N	N		-E4-X4	N			+UPS1&EFS/8.6

			Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm
			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS1-E4-X4
Protect 8.33 40-400-210-400

Terminal diagram

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=
+ UPS1
& EMA

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sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS1-F120

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		-K10	A1	1		-X120	1			+UPS1&EFS/22.7

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			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS1-F120
Protect 8.33 40-400-210-400

Terminal diagram

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=
+ UPS1
& EMA

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CAE EPLAN Electric P8

Terminal diagram

terminal
=+UPS1-F121

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		-K10	A2	1		-X120	2			+UPS1&EFS/22.8

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				Date	03.06.2024
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Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+UPS1-F121
Protect 8.33 40-400-210-400

Terminal diagram

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+ UPS1
& EMA

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CAE EPLAN Electric P8

Terminal diagram

terminal
=+UPS1-PE

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+MBC1-PE	PE	PE						+UPS1&EFS/4.3
				PE						+UPS1&EFS/8.4
				PE						+UPS1&EFS/1.4

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		Date	03.06.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS
		Editor	Beckschäfer		
		Checked	Ch.Peck		
Stat	Alteration Date Name	Norm			

Terminal diagram =+UPS1-PE
Protect 8.33 40-400-210-400

Terminal diagram

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= + UPS1 & EMA

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sheets 23

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Terminal diagram

terminal

=+UPS1-X12

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1		-A92.1-X3	4			+UPS1&EFS/11.5
				2		-A92.2-X10	2			+UPS1&EFS/11.5
				3		-A92.2-X10	3			+UPS1&EFS/11.5
		-A24.1-X1	+	4	'	-A92.1-X20	2			+UPS1&EFS/11.7
		-A24.1-X1	-	5	'	-A92.1-X20	1			+UPS1&EFS/11.7
				6		-CU	N			+UPS1&EFS/14.7
				7		-A9-A16-X8	5			+UPS1&EFS/14.2
				8		-A9-A16-X8	4			+UPS1&EFS/14.2
				9	●	-A9-A16-X8	6			+UPS1&EFS/14.2
				10		-A9-A50-X8	1			+UPS1&EFS/12.3
				11		-A9-A50-X8	2			+UPS1&EFS/12.3
						-Q3	96			
				12	●	-A9-A16-X8	7			+UPS1&EFS/14.2
				15		-A9-A50-X8	3			+UPS1&EFS/12.3
						-Q3	95			

	Date	03.06.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Terminal diagram =+UPS1-X12 Protect 8.33 40-400-210-400 Terminal diagram
	Editor	Beckschäfer			
	Checked	Ch.Peck			
Stat / Alteration / Date / Name	Norm				

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+ UPS1			
& EMA	1000007888_010 en	A3	sheet 19
			sheets 23

CAE EPLAN Electric P8

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Terminal diagram

terminal

=+UPS1-X13

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U		-F100	1:2			+UPS1&EFS/23.2
		-X14	U	U						+UPS1&EFS/23.2
				N		-A85-X1	2			+UPS1&EFS/23.2
		-X14	N	N						+UPS1&EFS/23.3
				PE						+UPS1&EFS/23.3
				PE						+UPS1&EFS/23.3

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS1-X14

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		-X13	U	U		-F110	1:2			+UPS1&EFS/23.7
		+MBC1-X13	U	U						+UPS1&EFS/23.7
		-X13	N	N		-X114	N			+UPS1&EFS/23.7
		+MBC1-X13	N	N						+UPS1&EFS/23.7

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			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS1-X14
Protect 8.33 40-400-210-400

Terminal diagram

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+ UPS1
& EMA

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sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS1-X15

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1		-A9-A50-X8	4			+UPS1&EFS/12.6
				1		-C711				+UPS1&EFS/12.7
				2		-C712				+UPS1&EFS/12.7
		+MBC1-X15	2	2		-A9-A50-X5	5			+UPS1&EFS/12.8
		+MBC1-X15	3	3		-A9-A50-X5	6			+UPS1&EFS/12.8

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			Date	03.06.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm
			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS1-X15
Protect 8.33 40-400-210-400

Terminal diagram

1000007888_010 en

= | + UPS1 | & EMA

A3

sheet 22
sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal
=+UPS1-X120

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1	'	-F120	1:1			+UPS1&EFS/22.7
				2	'	-F121	1:1			+UPS1&EFS/22.8

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+UPS1-X120
Protect 8.33 40-400-210-400

Terminal diagram

1000007888_010 en

=
+ UPS1
& EMA

A3

sheet 23
sheets 23

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Three-phase input
Attention! Observe sequence of wires, L1, L2, L3 -->
See technical data sheet for required mains fuses

Power section rectifier

mains transformer

Note: Reinforced insulated wire
0,75 mm² unmarked wires

-L61
N=2

Measurement REC Interface -A9-A50-X2
Supply REC Interface -A9-A50-X3

01L1 / 12.6
01L2 / 12.6
01L3 / 12.6
02L1 / 11.1
02L2 / 11.1
02L3 / 11.1

-L22
-T40
-L85.1
-L85.2

1L1 / 2.1
1L2 / 2.1
1L3 / 2.1
2L1 / 3.1
2L2 / 3.1
2L3 / 3.1

-C101.1
-C101.2
-C101.3
-Q1
L=100/85A
I=1,0kA
Icu=50kA
/12.4
-Q3
/12.3
-L23
-L24
-L25
-R23
-R24
-R25
-C23
-C24
-C25
3xR6 mm²

-A80
-A81
Suppression
-R86
-R87
-R88
-R81
-R82
-R83
-V81.1-V81.6
-R84.1
-R84.2
90
89
-C84
-C85

-E1
-X1
-A2
-A1
EMI capacitor 4-pole 8000022634 STR
-C4
-C5
-C1
-C6
-C2
-C7
-C3
-C8
-C9
-C10
-X2
-X3
-L92

Mains
400V;3/PE~50Hz

+MBC1
Bypass transformer cabinet
with manual bypass 40 kVA
1000007888.020
10009757

GZ1_1 +MBC1/1.6
GZ1_2 +MBC1/1.6
GZ1_3 +MBC1/1.6

Rack
-PE
PE busbar
Cu 40x5 mm
GNYE 6 mm²
Tür links
Pivot plate

1000007888_010

				Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Rectifier input Protect 8.33 40-400-210-400 Circuit diagram	1000007888.010 10009756	1000007888_010 en	= + UPS2 & EFS	A3	sheet 1 sheets 23
				Editor	Beckschäfer								
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Stat	Alteration	Date	Name	Norm									

Power section rectifier

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-A1
/3.1

4.1 / 2L+ -L+:X2:1 → 1L+ / 3.2

4.1 / 2L- -L-:X2:2 → 1L- / 3.2

1.8 / 1L1 -L1:X1:1
1.8 / 1L2 -L2:X1:2
1.8 / 1L3 -L3:X1:3

-C85.1 -C85.2 -C85.3

-T80 -T81

-V1 -V2 -V3

RD

-A82 REC suppression 6765463 STR
-K -AK1 -AK2 -AK3 -A

-A80 REC trigger circuit 8000023368 STR
-X6:1
2

-X7 -X8 -X3 -X4 -X5

GR-Strom 15 | GND 16 | V2 4 | V1 2 | V4 8 | V3 6 | V6 12 | V5 10 | GND 1 | GND 3 | +24V 13 | +24V 14 | V12 20 | V11 18 | V14 24 | V13 22 | V16 28 | V15 26 | GND 17 | GND 19 | +24V 29 | +24V 30

V12 4 | V11 2 | V14 8 | V13 6 | V16 12 | V15 10 | GND 1 | GND 3 | +24V 13 | +24V 14 → -X2 1-40

0FB2 / 3.1 REC triggering -A1-A81-X1

-X9 1 2
-R100 1 2

-X1 1-40

-0FB1
40x

REC interface -A9-A50-X1 → 0FB1 / 12.4

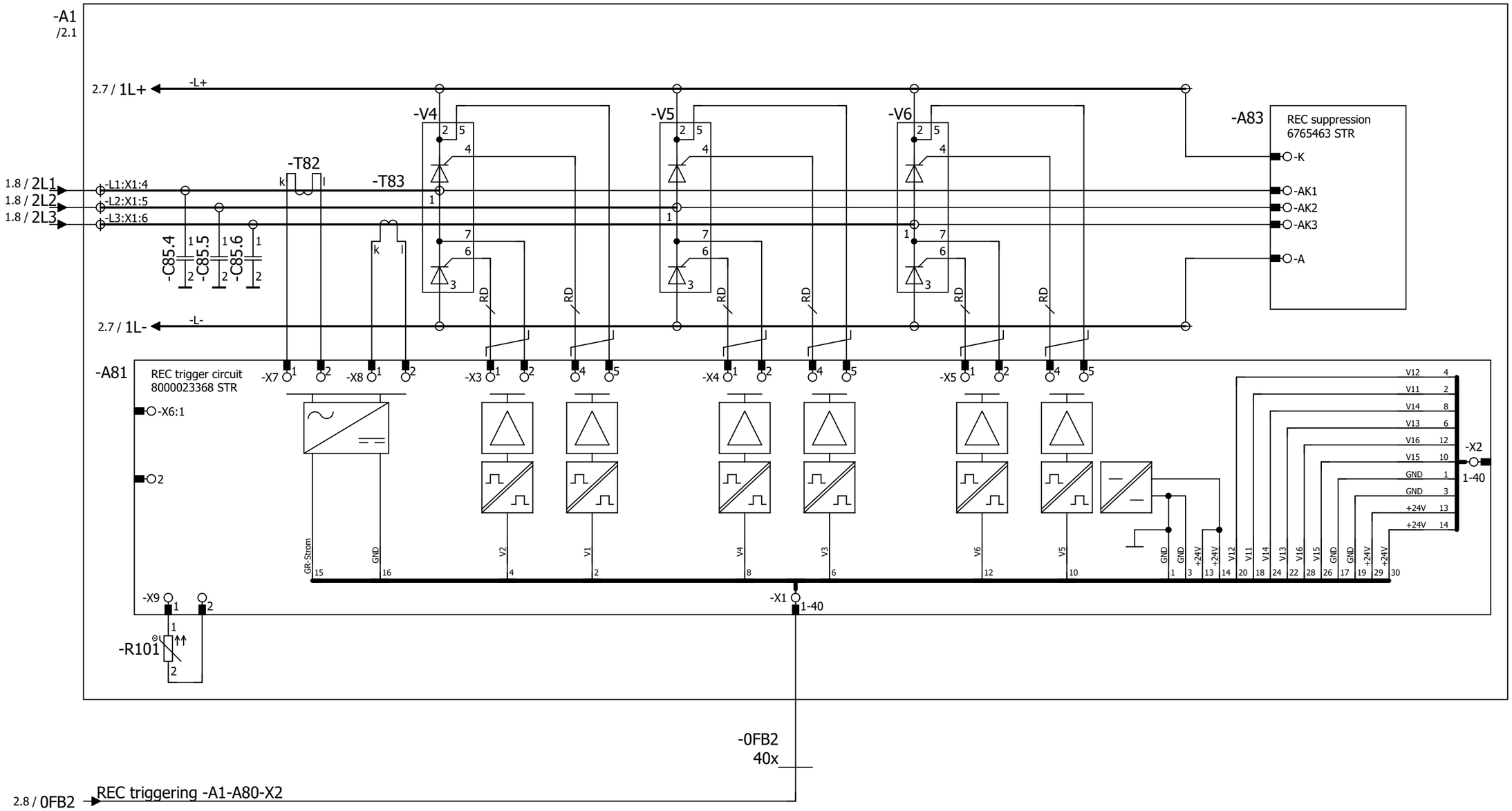
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				Editor	Beckschäfer					+ UPS2	
				Checked	Ch.Peck				1000007888.010 10009756	& EFS	A3 sheet 2 / sheets 23
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Power section rectifier

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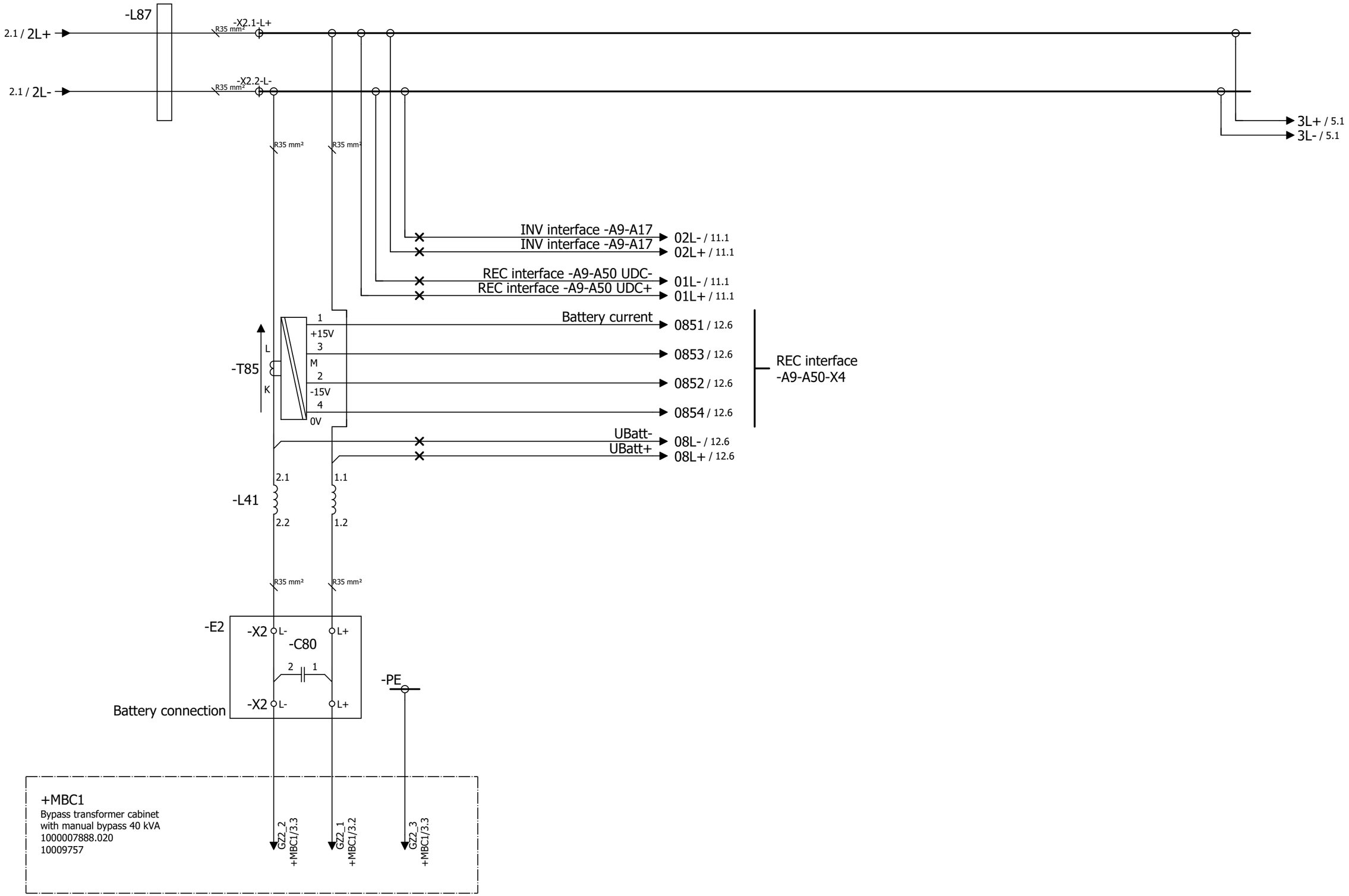
				Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Power section rectifier Protect 8.33 40-400-210-400	=
				Editor	Beckschäfer				+ UPS2
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A3 | sheet 3 | sheets 23

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Power section rectifier
Battery connection

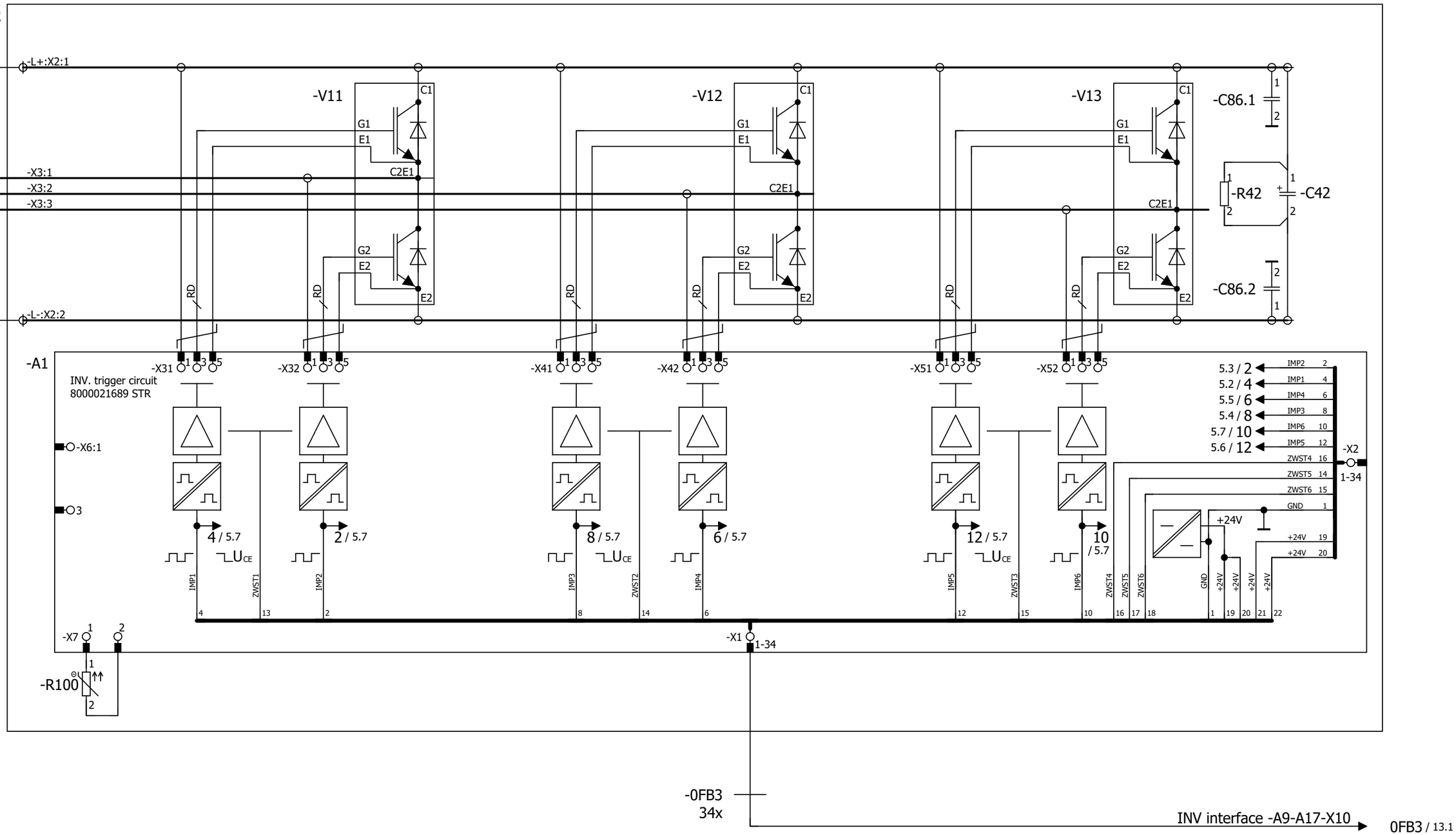


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Stat	Alteration	Date	Name	Norm				Circuit diagram	1000007888.010 10009756	1000007888_010 en

A3 | sheet 4 | sheets 23

Power section inverter



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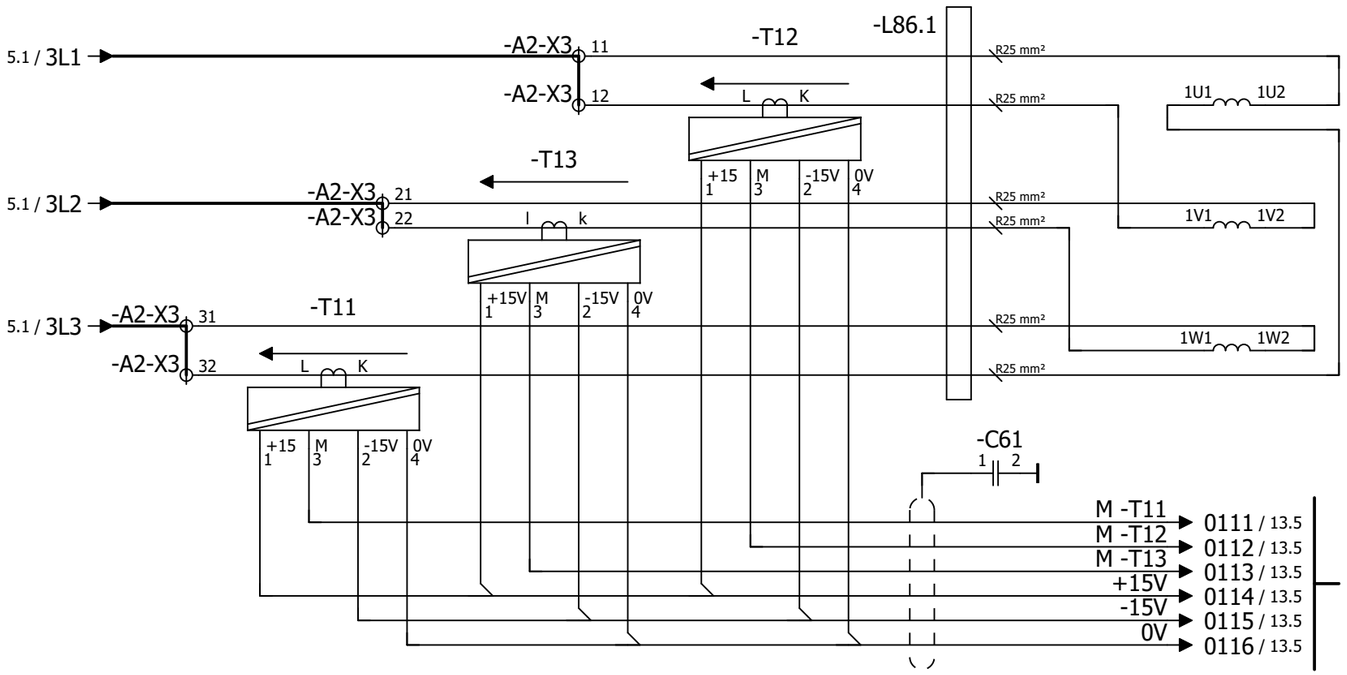
				Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Power section inverter Protect 8.33 40-400-210-400 Circuit diagram	1000007888.010 10009756	1000007888_010 en	= + UPS2 & EFS	A3	sheet 5 sheets 23
				Editor	Beckschäfer								
				Checked	Ch.Peck								
Stat	Alteration	Date	Name	Norm									

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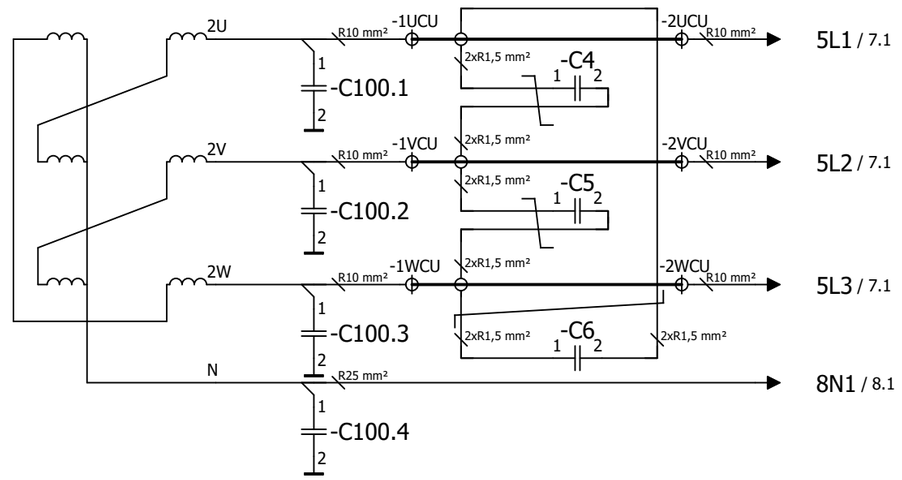
Power section inverter

Measuring INV current dynamic



INV interface
-A9-A17-X19

-T1



				Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Inverter output Protect 8.33 40-400-210-400		=	
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Stat	Alteration	Date	Name	Norm				Circuit diagram	10009756	1000007888_010 en	sheets 23

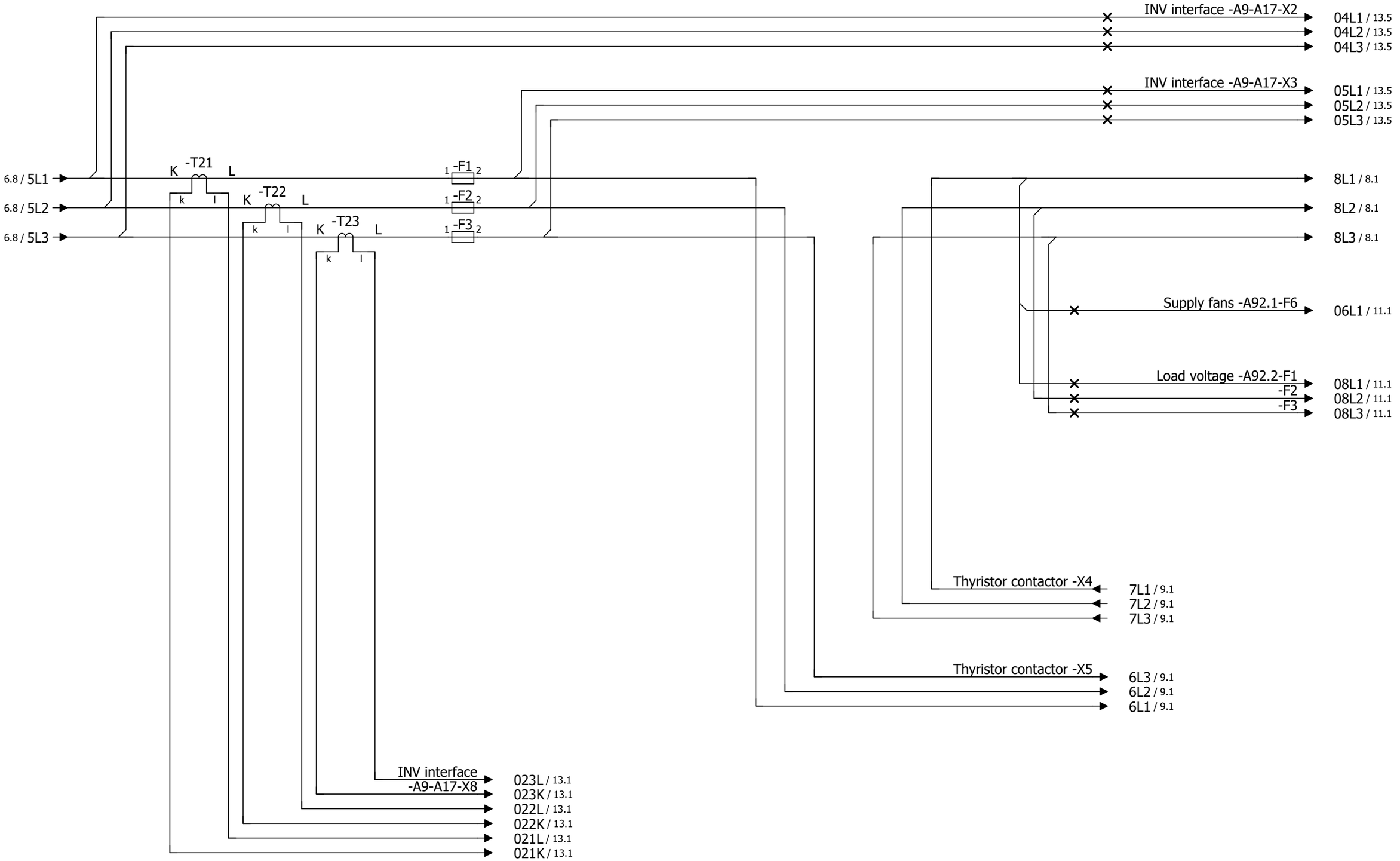
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Power section inverter

Measurement INV current static

Output fuse



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				Editor	Beckschäfer			
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Stat	Alteration	Date	Name	Norm				

		=		
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Power section inverter

Parallel preventive choke coil

7.8 / 8L1
7.8 / 8L2
7.8 / 8L3
6.8 / 8N1

-L11 -L12 -L13

R10 mm² R25 mm² R35 mm² 2xR35 mm²

SBS Output → 10L1 / 10.1, 10L2 / 10.1, 10L3 / 10.1

SBS Input → 9L1 / 10.1, 9L2 / 10.1, 9L3 / 10.1

fan neutral conductor → 0451N1 / 17.1

neutral conductor → 04N1 / 13.5

-A105
-C56 -C57 -C58
-X1 -X2 -X3 -X4

-E3
-X3 U V W N
-A4
-X4
EMI capacitor 4-pole 8000022634 STR
-C4 -C5 -C1 -C6 -C2 -C7 -C3 -C8 -C9 -C10
-X1 -X2 -X3

-L93

-A3
-X4
EMI capacitor 4-pole 8000022634 STR
-C4 -C5 -C1 -C6 -C2 -C7 -C3 -C8 -C9 -C10
-X1 -X2 -X3

Load
400V;3/N/PE~50Hz
-X3 U V W N

-PE

-E4
-X4 U V W N
-A4
-X4
EMI capacitor 4-pole 8000022634 STR
-C4 -C5 -C1 -C6 -C2 -C7 -C3 -C8 -C9 -C10
-X1 -X2 -X3

-L94

-A3
-X4
EMI capacitor 4-pole 8000022634 STR
-C4 -C5 -C1 -C6 -C2 -C7 -C3 -C8 -C9 -C10
-X1 -X2 -X3

Mains
400V;3/N/PE~50Hz
-X4 U V W N

+MBC1
Bypass transformer cabinet
with manual bypass 40 kVA
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GZ3_1 +MBC1/6.5
GZ3_2 +MBC1/6.5
GZ3_3 +MBC1/6.6
GZ3_4 +MBC1/6.6

GZ4_1 +MBC1/5.6
GZ4_2 +MBC1/5.6
GZ4_3 +MBC1/5.6
GZ4_4 +MBC1/5.6

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Load output / SBS circuit
Protect 8.33 40-400-210-400

Circuit diagram

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A3

sheet 8
sheets 23

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Power section inverter
Inverter output contactor

-A4

-A37 SBS suppression 8000028996 STR

-A3 -K3 -AK3 -A2 -K2 -AK2 -A1 -K1 -AK1

-V31

-X4:1AC
-X4:1
-X4:1K

A K AK G2 K2 K1 G1

-V33

-X4:2AC
-X4:2
-X4:2K

-V35

-X4:3AC
-X4:3
-X4:3K

RD

-A36 SBS trigger circuit 8000028563 STR

-X2 -X3 -X4 -X5:1 -X5:2

GND EUE_EIN GND GND +24V +24V 1 2 3 4 5 6 7 8 9 10

-X6 1 2

-R100

-X1 1-10

-0FB10
10x

-X6 5 6 3 4 1 2

7.7 / 7L1
7.7 / 7L2
7.7 / 7L3
7.7 / 6L3
7.7 / 6L2
7.7 / 6L1

INV interface -A9-A17-X1 → 0FB10 / 13.1

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Power section SBS

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-A3

-A37 SBS suppression 8000028996 STR

-A3 -K3 -AK3 -A2 -K2 -AK2 -A1 -K1 -AK1

SBS mains voltage -A92.2-F6 → 010L1 / 11.1
-A92.2-F7 → 010L2 / 11.1
-A92.2-F8 → 010L3 / 11.1

8.8 / 9L1 SBS mains
8.8 / 9L2 SBS mains
8.8 / 9L3 SBS mains

-V31 -V33 -V35

-X4:1AC -X4:1 -X4:1K
-X4:2AC -X4:2 -X4:2K
-X4:3AC -X4:3 -X4:3K

A K AK G2 K2 K1 G1 RD

-X2 -X3 -X4

-A36 SBS trigger circuit 8000028563 STR

-X5:1
2

EIN GND GND GND +24V +24V

-X6 1 2
-X1 1-10
-R100

SBS interface -A9-A16-X1 → 0FB9 / 14.3

-X6 5
-X6 6
-X6 3
-X6 4
-X6 1
-X6 2

8.8 / 10L3 UPS Output
8.8 / 10L2
8.8 / 10L1

-X5:3
-X5:2
-X5:1

SBS interface -A9-A16-X4 → 03151L / 14.3
-A9-A16-X4 → 03151K / 14.3
-A9-A16-X4 → 03352L / 14.3
-A9-A16-X4 → 03352K / 14.3
-A9-A16-X4 → 03553L / 14.3
-A9-A16-X4 → 03553K / 14.3

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Power section SBS
Protect 8.33 40-400-210-400

Circuit diagram

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+ UPS2
& EFS

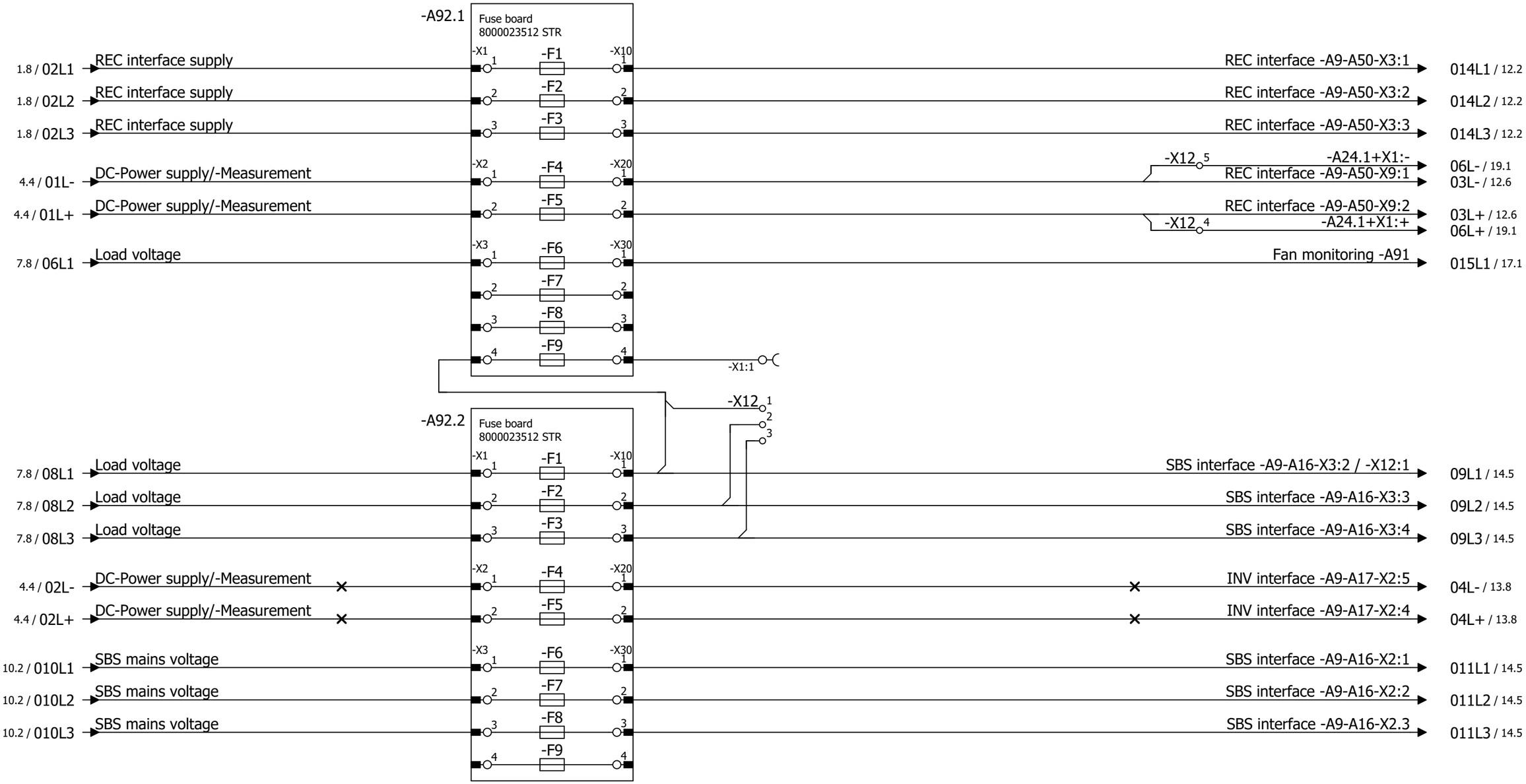
A3

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sheets 23

Fuse boards

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Rectifier control

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-A9
/16.1

4.4 / 0854
4.4 / 0851
4.4 / 0853
4.4 / 0852
Battery current transformer -T85

4.4 / 08L+
4.4 / 08L-
UBatt+
UBatt-

11.8 / 03L+
11.8 / 03L-
UIC+ A92.1-F5
UIC- A92.1-F4

1.8 / 01L3
1.8 / 01L2
1.8 / 01L1
-Q1 REC input voltage

11.8 / 014L3
11.8 / 014L2
11.8 / 014L1
-T40 sec. supply REC

2.8 / 0FB1
REC trigger circuit -A1-A80-X1

-A50
/16.2
REC interface
8000022025 STR

-X3 1 2 3
-X5 7 8
-X1 1-40
-X2 1 3 5
-X9 1 2 3 4
-X4 2 3 1 4
-15V +15V

GND V1 GND V2 V3 V4 V5 V6 +24V +24V GND V11 GND V12 V13 V14 V15 V16 +24V +24V REC current
+24V
+24V

-R204
-R206
REC current stack A1
REC current stack A2

-X11 1-50
-A50X11__50x
-X12 1-50
-A50X12__50x

-A1
REC control
8000014119 STR

-X19 1 2 3
-X15 1 4
-X8 1 2 3
-X5 3 4 +24V DC
-X8 4 5 6
-X5 5 6

-X130 1 2
-X12 10 11 15
-Q3
/1.4
96 98
95
-Q1 C1 C2

BK R1,5 mm²
BK R2,5 mm²
BK R2,5 mm²
BK R1,5 mm²
BK R1,5 mm²
-C711 220000µF
-C712 220000µF
0V
-X15 1 1
-X15 2 2 (+) 3 (-)
*1

GZ130_1
GZ130_2

+MBC1
Bypass transformer cabinet
with manual bypass 40 kVA
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GZ15_2 +MBC1/3.4
GZ15_3 +MBC1/3.4

+MBC1
Bypass transformer cabinet
with manual bypass 40 kVA
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*1 Attention! In the event of battery undervoltage < 130 V, the UPS automatically switches off battery isolator Q2.
If this happens, switch X15:3 must be switched into the open position (undervoltage trip blocked).
For restart, please refer to the chapter in the UPS operating instructions (charging the DC link capacitors).
Unlock the tripped switch Q2 by switching to open position.
After charging the DC link capacitors, switch on Q2.
Attention! When the battery voltage reaches > 200 V, switch X15:3 must be switched back to the closed position.

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Rectifier control
Protect 8.33 40-400-210-400

Circuit diagram

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=
+ UPS2
& EFS

A3

sheet 12
sheets 23

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Inverter control

INV current static

7.3 / 023L Transformer -T23
7.3 / 023K
7.3 / 022L Transformer -T22
7.3 / 022K
7.3 / 021L Transformer -T21
7.3 / 021K

INV. trigger circuit
-A2-A1-X1
5.8 / 0FB3

Trigger circuit
-A4-A36-X1
9.7 / 0FB10

INV current dynamic

7.8 / 05L1 INV output voltage reference
7.8 / 05L2
7.8 / 05L3
8.8 / 04N1 neutral conductor → N → 05N1 / 14.5
7.8 / 04L1 INV output voltage
7.8 / 04L2
7.8 / 04L3

6.5 / 0116 Transformer -T11...-T13
6.5 / 0115
6.5 / 0113
6.5 / 0112
6.5 / 0111
6.5 / 0114

11.8 / 04L+ UIC+
11.8 / 04L- UIC-

-A9
/16.1

-A17
/16.3
INV interface
8000022441 STR

-X1 1-10: GND, SBS_ON, GND, GND, +24V, +24V → +24V
-X10 1-34: IMP1, IMP2, IMP5, IMP6, ZWST1, ZWST3, +24V, +24V, GND → +24V
-X4 1 2 3 4 5 6 -X8 6
-X13 2 3 1 4: -15V, +15V
-X20 4 1 2 3 5 6: +15V, -15V
-X19 4 1 2 3 5 6: +15V, -15V
-X2 1W 2V 3U -X3 1N 2U 3V 4W
-X2 5 4

-R203 -R205 -R207
-R204 -R206 -R208
INV current static

-S201
-S202
-S203
INV current dynamic

-X11 1-50: 48 14 13 12 17 21 23 49
-X12 1-50: 47 45 49 32 29 30 31 39 38 37 1 2
-X4 / -X8: 27 28 21 22 19 20 23 48 46 50

-A17X11 50x
-A17X12 50x

-A1
INV control
8000042636 STR
-X11 1-50: 48 14 13 12 17 21 23 49
-X12 1-50: 27 28 21 22 19 20 23 48 46 50 47 45 49 32 29 30 31 39 38 37 1 2

-X15 1 4
-X5 1 2 (+)
-X5 5 6 (+)
-X8 8 7
-X5 3 4 (+)
-X8 1 2

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Control SBS

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-A9 /16.1

10.4 / 03553L Transformer -T35
10.4 / 03553K
10.4 / 03352L Transformer -T33
10.4 / 03352K
10.4 / 03151L Transformer -T31
10.4 / 03151K

11.8 / 09L1 Load voltage
11.8 / 09L2
11.8 / 09L3

13.8 / 05N1 neutral conductor → -X1:3, -X12 6

11.8 / 011L1 SBS mains voltage
11.8 / 011L2
11.8 / 011L3

10.2 / 0FB9 SBS trigger circuit -A3-A36-X1

-L62

-A16 /16.4
SBS interface
8000022378 STR

-X1 1-10: 1 GND, 2 SBS_ON, 3 GND, 4 GND, 5 +24V, 6 +24V, 7 8 9 10
+24V

-X4 1 2 3 4 5 6

SBS current

-X2 1U 2V 3W
-X3 1N 2U 3V 4W

-X12 12 → -X8 7
7 → 5
8 → 4
9 → 6
-X18 1 → 1
2 → 2

-R120 1 2

-R201 -R203 -R205
-R202 -R204 -R206

15 16 26 17 21 29 30 27 45 46 35 36 33 41 42 39

-X11 1-50
-X12 1-50

-A16X11 ___ 50x
-A16X12 ___ 50x

-A1
SBS control
8000008845 STR

-X15 1 2 3 +24V 4 5

Fan control -A92.1-X6
091.11 / 17.7
091.12 / 17.7
091.13 / 17.7
091.14 / 17.7
091.15 / 17.7

1000007888_010

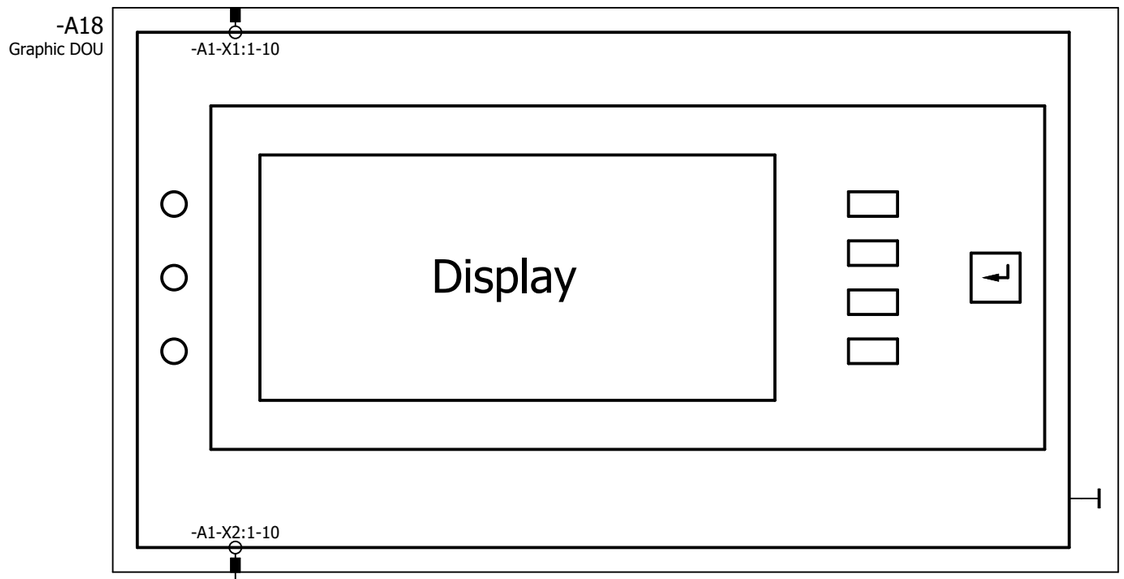
				Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Control SBS Protect 8.33 40-400-210-400 Circuit diagram	=
				Editor	Beckschäfer				+ UPS2
				Checked	Ch.Peck			1000007888.010 10009756	1000007888_010 en
Stat	Alteration	Date	Name	Norm					& EFS

A3 | sheet 14 | sheets 23

Control

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DOU-CAN

A / 16.1

1000007888_010

				Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	DOU Protect 8.33 40-400-210-400 Circuit diagram		=
				Editor	Beckschäfer					+ UPS2
				Checked	Ch.Peck			1000007888.010 10009756	1000007888_010 en	& EFS
Stat	Alteration	Date	Name	Norm						A3 sheet 15 / sheets 23

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Control

+UPS2
Protect 8.33 40-400-210-400
1000007888.010
10009756

GZ20_3
+UPS1/16.6

GZ20_5
+UPS1/16.7

INV
-CAN

INV
-sync

-A9
/12.1
/13.1
/14.2
/20.1
/21.1
/22.1

-A50
/12.1
REC interface
8000022025 STR

-X6 1-10
-X7 1-16

-A17
/13.1
INV interface
8000022441 STR

-X6 1-10
-X7 1-16

-A16
/14.2
SBS interface
8000022378 STR

-X6 1-10
-X7 1-16

-A20
Parallel Adapter
8000023378 STR

-X3 1-3
-X4 1-3
-X5 1-4
-X6 1-2

-X1 1-16
-X2 1-16
-X11 1-10
-X12 1-10
-X13 1-10
-X14 1-10

Parallel CAN INV

Parallel CAN REC

15.8 / A

DOU-CAN

A / 20.1

L / 19.1

1000007888_010

				Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Control CAN Protect 8.33 40-400-210-400 Circuit diagram	1000007888.010 10009756	=
				Editor	Beckschäfer					+ UPS2
				Checked	Ch.Peck				1000007888_010 en	& EFS
Stat	Alteration	Date	Name	Norm						A3 sheet 16 / sheets 23

Fan control/monitoring

CAE EPLAN Electric P8

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11.8 / 015L1 → 016L1 / 18.1

8.8 / 0451N1 → 0452N1 / 18.1

-A91.2-X6 → 091.21 / 18.7, 091.22 / 18.7, 091.23 / 18.7, 091.24 / 18.7, 091.25 / 18.7

-A91.1 Fan control 8000022841 STR

-X5: 1, 2, 3

-R5, -C5

Logical evaluation fan fault

-S1, -S2

= 1

-R50 -R51 (P2, P1) =

-R60 -R61 (P4, P3) =

-R70 -R71 (P6, P5) =

-R80 -R81 (P8, P7) =

-R1 PTC -X1: 2, 1

-R2 PTC -X2: 2, 1

-R3 PTC -X3: 2, 1

-R4 PTC -X4: 2, 1

-C31 1 2

-X91: 2, N, L, 3, 1

-M1 M 1~ PE

-C32 1 2

-X92: 2, N, L, 3, 1

-M2 M 1~ PE

-C33 1 2

-X93: 2, N, L, 3, 1

-M3 M 1~ PE

-C34 1 2

-X94: 2, N, L, 3, 1

-M4 M 1~ PE

-X7: 1, 2, 3, 4, 5

Fan speed

+24V

-X6: 1, 2, 3, 4, 5

14.6 / 091.11

14.6 / 091.12

14.6 / 091.13

14.6 / 091.14

14.6 / 091.15

SBS interface -A9-A16-X15

1000007888_010

				Date	23.05.2024
				Editor	Beckschäfer
				Checked	Ch.Peck
Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Fan control/monitoring
Protect 8.33 40-400-210-400

Circuit diagram

1000007888.010
10009756

1000007888_010 en

=
+ UPS2
& EFS

A3

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sheets 23

Fan control/monitoring

CAE EPLAN Electric P8

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17.8 / 016L1

17.8 / 0452N1

-A91.2
Fan control
8000022841 STR

-X5 1 2 3

-R5
-C5

-S1
-S2

= 1

Logical evaluation
fan fault

-X7 1 2 3 4 5

Fan speed
+24V

P2 P4 P6 P8
-R50 -R51 -R60 -R61 -R70 -R71 -R80 -R81
P1 P3 P5 P7

-R1 PTC
-R2 PTC
-R3 PTC
-R4 PTC

-X1 2 1
-X2 2 1
-X3 2 1
-X4 2 1

-X6 1 2 3 4 5

-C35
-X95 1 2 3
N L
-M5 M 1~ PE 1

-C36
-X96 1 2 3
N L
-M6 M 1~ PE 1

17.8 / 091.21
17.8 / 091.22
17.8 / 091.23
17.8 / 091.24
17.8 / 091.25
-A92.1-X7

1000007888_010

				Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Fan control/monitoring Protect 8.33 40-400-210-400 Circuit diagram	=
				Editor	Beckschäfer				+ UPS2
				Checked	Ch.Peck			1000007888.010 10009756	& EFS
Stat	Alteration	Date	Name	Norm				1000007888_010 en	A3 sheet 18 / sheets 23

Control

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CAE EPLAN Electric P8

+MBC1
Bypass transformer cabinet
with manual bypass 40 kVA
1000007888.020
10009757

GZ91_1
+MBC1/3.5

-F91
G
F3,15A
1
2

11.8 / 06L+

-A24.1
Battery charge monitoring
BLÜ-PRO
(Option)

-X1 +
M
-
-
-
-
0 ... 5V
-X1 -
-X3 1-16
-X4 1-10

16.8 / L

11.8 / 06L-

1000007888_010

				Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	battery charging circuit monitoring Protect 8.33 40-400-210-400		=
				Editor	Beckschäfer					+ UPS2
				Checked	Ch.Peck					& EFS
Stat	Alteration	Date	Name	Norm				Circuit diagram	1000007888.010 10009756	1000007888_010 en

A3 | sheet 19 | sheets 23

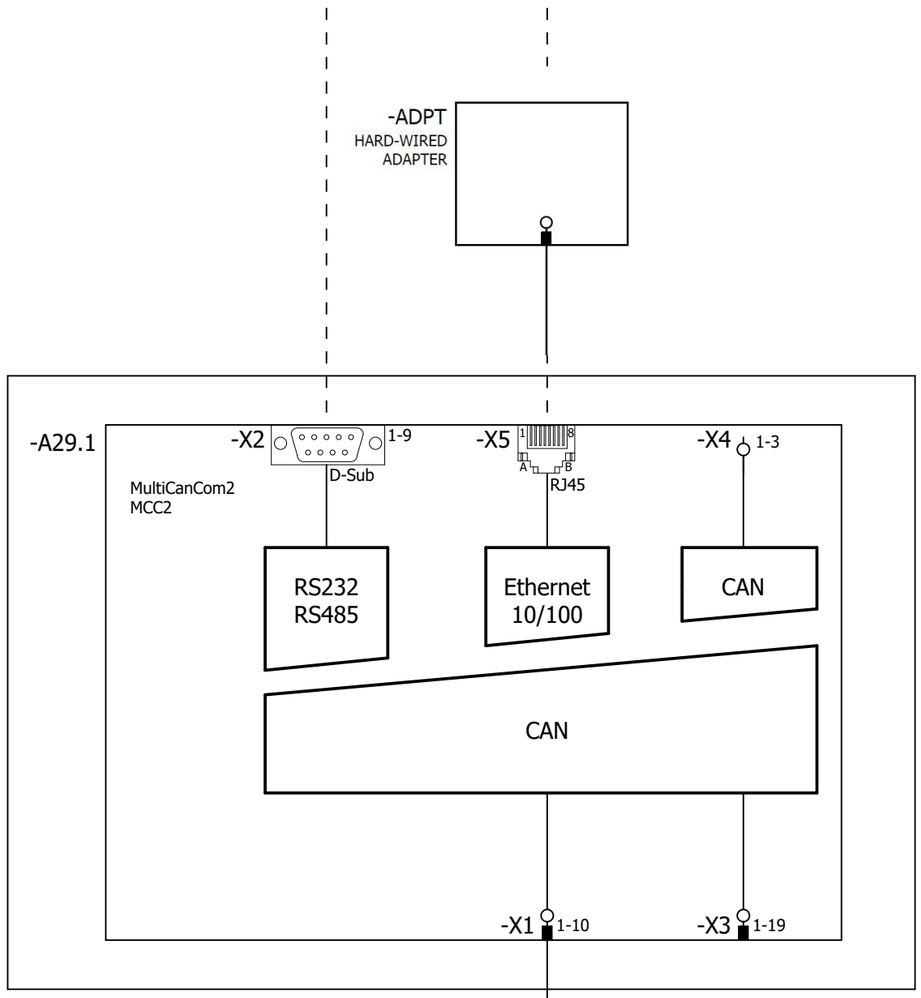
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Control

SNMP adapter
CompuWatch
Service Tools
Modbus

Modbus



16.8 / A → DOU-CAN → A / 21.1

1000007888_010

				Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	MultiCom Protect 8.33 40-400-210-400 Circuit diagram	1000007888.010 10009756	1000007888_010 en
				Editor	Beckschäfer					
				Checked	Ch.Peck					
Stat	Alteration	Date	Name	Norm						

=
+ UPS2
& EFS

A3

sheet 20
sheets 23

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CAE EPLAN Electric P8

Remote signaling

CAN Service

Configuration remote signals
see techn. data sheet

INV remote off

Common fault

Inverter operation

SBS operation

REC fault

REC mains fault

Battery low

-A9
/16.1

-A12
Remote signaling
8000062777 STR

-X6 1-10

-X5 1 2

-X4 1 2 3

-X3 1 2 3 4 5 6 7 8 9 10 11 12

-K25 -K21 -K22 -K23 -K24

-X1 1-10

-X2 1-16

20.8 / A

B / 22.1

1000007888_010

				Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Remote signaling Protect 8.33 40-400-210-400		=
				Editor	Beckschäfer					+ UPS2
				Checked	Ch.Peck				1000007888.010	& EFS
Stat	Alteration	Date	Name	Norm				Circuit diagram	10009756	1000007888_010 en

A3 | sheet 21 | sheets 23

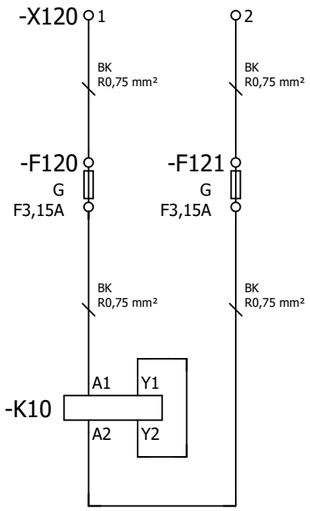
Remote signaling

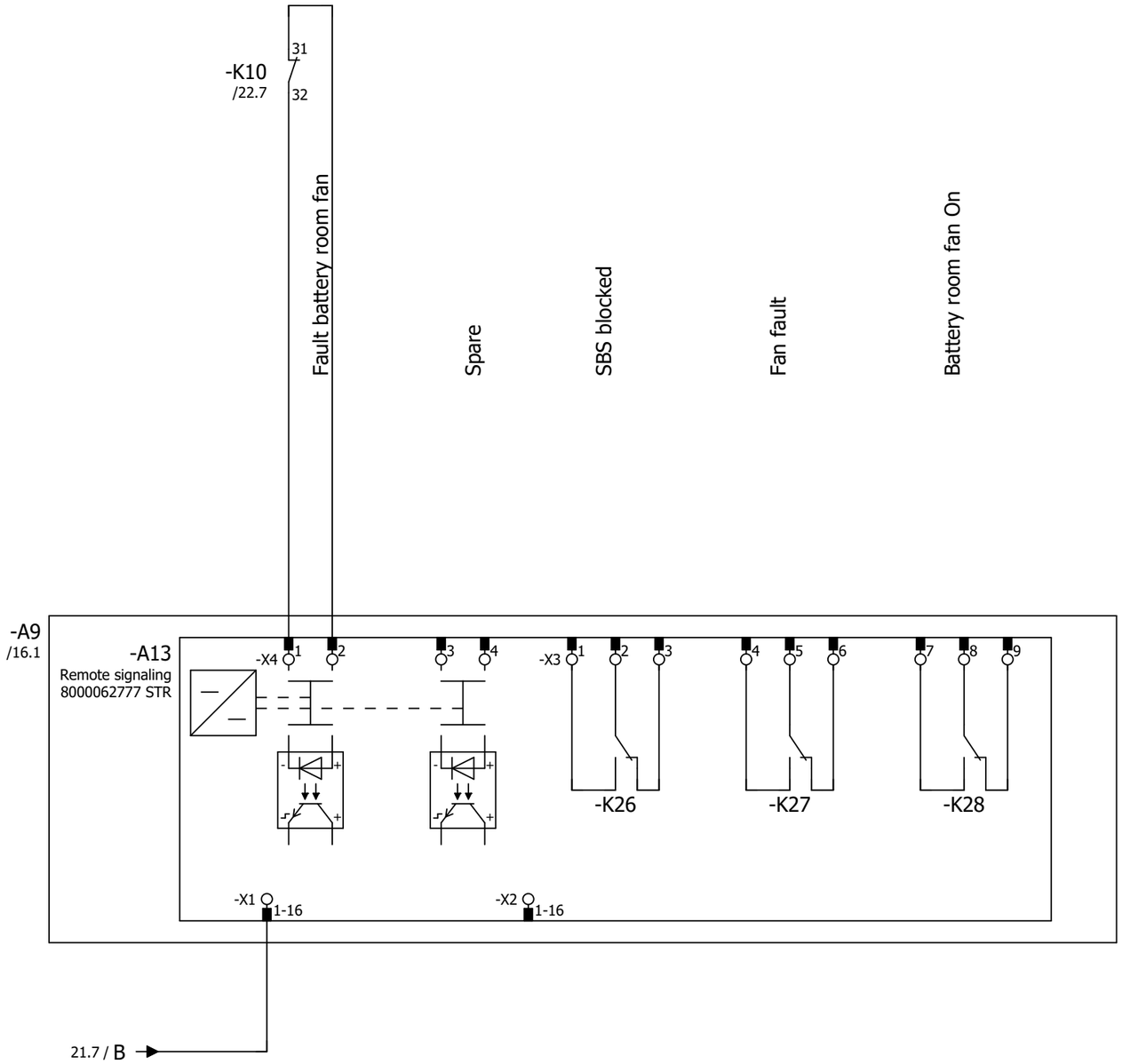
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Configuration remote signals
see techn. data sheet

24V DC is permanently present
in fault-free operation





PXC.2981020_PSR-SCP- 24DC/ESP4/2X1/1X2

13 — 14
23 — 24
31 — 32 /22.2

1000007888_010

				Date	28.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Remote signaling Protect 8.33 40-400-210-400		=	
				Editor	Beckschäfer					+ UPS2	
				Checked	Ch.Peck					& EFS	A3 sheet 22
Stat	Alteration	Date	Name	Norm				Circuit diagram	1000007888.010 10009756 1000007888_010 en		sheets 23

CAE EPLAN Electric P8

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+MBC1
Bypass transformer cabinet
with manual bypass 40 kVA
1000007888.020
10009757

GZ13_1
+MBC1/17.6

GZ13_2
+MBC1/17.7

BK
R1,5 mm²

BK
R1,5 mm²

-X13 U U N N PE PE

BK
0,75 mm²

-F100 1
G
T6,3A 2

BK
0,75 mm²

BK
0,75 mm²

L
-F85
3 2

-A85 -X1 3 2
-R1

-X14 U U N N

BK
0,75 mm²

-F110 1
G
T6,3A 2

BK
0,75 mm²

BK
0,75 mm²

-X114 U N

-W100
H05VV
2x1 mm²
3 m

L N
-H1
Enclosure light

1000007888_010

				Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	external connection Protect 8.33 40-400-210-400		=	
				Editor	Beckschäfer					+ UPS2	
				Checked	Ch.Peck				1000007888.010 10009756	& EFS	A3 sheet 23
Stat	Alteration	Date	Name	Norm				Circuit diagram	1000007888_010 en		sheets 23

CAE EPLAN Electric P8

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Terminal diagram

terminal

=+UPS2-A9-A12-X3

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1						+UPS2&EFS/21.5
				2						+UPS2&EFS/21.5
				3						+UPS2&EFS/21.5
				4						+UPS2&EFS/21.5
				5						+UPS2&EFS/21.6
				6						+UPS2&EFS/21.6
				7						+UPS2&EFS/21.6
				8						+UPS2&EFS/21.6
				9						+UPS2&EFS/21.6
				10						+UPS2&EFS/21.7
				11						+UPS2&EFS/21.7
				12						+UPS2&EFS/21.7

1000007888_010

				Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Terminal diagram =+UPS2-A9-A12-X3 Protect 8.33 40-400-210-400 Terminal diagram		=	
				Editor	Beckschäfer					+ UPS2	
				Checked	Ch.Peck				1000007888_010 en	& EMA	A3 sheet 1 / sheets 24
Stat	Alteration	Date	Name	Norm							

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-A9-A12-X4

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1						+UPS2&EFS/21.4
				2						+UPS2&EFS/21.4
				3						+UPS2&EFS/21.4

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			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS2-A9-A12-X4
Protect 8.33 40-400-210-400

Terminal diagram

1000007888_010 en

=
+ UPS2
& EMA

A3

sheet 2
sheets 24

CAE EPLAN Electric P8

Terminal diagram

terminal
=+UPS2-A9-A12-X5

Cable name / Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name / Cable type	Position / Page
			1					+UPS2&EFS/21.3
			2					+UPS2&EFS/21.3

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CAE EPLAN Electric P8

Terminal diagram

Cable name	terminal =+UPS2-A9-A12-X6					Cable name			
Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable type			Position / Page
			1-10		-A9-A12-X1					+UPS2&EFS/21.2

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			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS2-A9-A12-X6
Protect 8.33 40-400-210-400

Terminal diagram

1000007888_010 en

=
+ UPS2
& EMA

A3

sheet 4
sheets 24

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-A9-A29.1-X2

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1-9						+UPS2&EFS/20.2

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		Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS
		Editor	Beckschäfer		
		Checked	Ch.Peck		
Stat	Alteration Date Name	Norm			

Terminal diagram =+UPS2-A9-A29.1-X2
Protect 8.33 40-400-210-400

Terminal diagram

1000007888_010 en

= / + UPS2 / & EMA

A3

sheet 5
sheets 24

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-A9-A29.1-X4

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1-3						+UPS2&EFS/20.3

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			Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm
			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS2-A9-A29.1-X4
Protect 8.33 40-400-210-400

Terminal diagram

1000007888_010 en

=
+ UPS2
& EMA

A3

sheet 6
sheets 24

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-A9-A29.1-X5

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1-8						+UPS2&EFS/20.3

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		Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS
		Editor	Beckschäfer		
		Checked	Ch.Peck		
Stat	Alteration Date Name	Norm			

Terminal diagram =+UPS2-A9-A29.1-X5
Protect 8.33 40-400-210-400

Terminal diagram

1000007888_010 en

= | + UPS2 | & EMA

A3

sheet 7
sheets 24

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-A20-X3

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+UPS1-A20-X3	1-3	1-3						+UPS2&EFS/16.6

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				Date	03.06.2024
				Editor	Beckschäfer
				Checked	Ch.Peck
Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+UPS2-A20-X3
Protect 8.33 40-400-210-400

Terminal diagram

1000007888_010 en

=
+ UPS2
& EMA

A3

sheet 8
sheets 24

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-A20-X4

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1-3						+UPS2&EFS/16.7

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			Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm
			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS2-A20-X4
Protect 8.33 40-400-210-400

Terminal diagram

1000007888_010 en

=
+ UPS2
& EMA

A3

sheet 9
sheets 24

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-A20-X5

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+UPS1-A20-X5	1-4	1-4						+UPS2&EFS/16.7

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				Date	03.06.2024
				Editor	Beckschäfer
				Checked	Ch.Peck
Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+UPS2-A20-X5
Protect 8.33 40-400-210-400

Terminal diagram

1000007888_010 en

=
+ UPS2
& EMA

A3

sheet 10
sheets 24

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Terminal diagram

terminal

=+UPS2-A20-X6

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1-2						+UPS2&EFS/16.7

		Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS
		Editor	Beckschäfer		
		Checked	Ch.Peck		
Stat	Alteration Date Name	Norm			

Terminal diagram =+UPS2-A20-X6
Protect 8.33 40-400-210-400

Terminal diagram

1000007888_010 en

= | + UPS2 | & EMA | A3 | sheet 11 | sheets 24

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Terminal diagram

terminal

=+UPS2-E1-X1

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U		-E1-X1	U			+UPS2&EFS/1.2
						-Q1	2			
		+MBC1-X1	4U	U		-E1-X1	U			+UPS2&EFS/1.2
				V		-E1-X1	V			+UPS2&EFS/1.2
						-Q1	4			
		+MBC1-X1	4V	V		-E1-X1	V			+UPS2&EFS/1.2
				W		-E1-X1	W			+UPS2&EFS/1.2
						-Q1	6			
		+MBC1-X1	4W	W		-E1-X1	W			+UPS2&EFS/1.2

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				Checked	Ch.Peck		
Stat	Alteration	Date	Name	Norm			

Terminal diagram =+UPS2-E1-X1
Protect 8.33 40-400-210-400

Terminal diagram

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=
+ UPS2
& EMA

A3

sheet 12
sheets 24

CAE EPLAN Electric P8

Terminal diagram

terminal
=+UPS2-E2-X2

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				L+		-L41	1.2			+UPS2&EFS/4.3
		+MBC1-X2	3L+	L+						+UPS2&EFS/4.3
				L-		-L41	2.2			+UPS2&EFS/4.2
		+MBC1-X2	3L-	L-						+UPS2&EFS/4.2

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Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS2-E2-X2
Protect 8.33 40-400-210-400

Terminal diagram

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+ UPS2
& EMA

A3

sheet 13
sheets 24

CAE EPLAN Electric P8

Terminal diagram

terminal
=+UPS2-E3-X3

Cable name / Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name / Cable type	Position / Page
			U		-E3-X3	U		+UPS2&EFS/8.2
					-L11	2		
	+MBC1-X5	2U	U		-E3-X3	U		+UPS2&EFS/8.2
			V		-E3-X3	V		+UPS2&EFS/8.2
					-L12	2		
	+MBC1-X5	2V	V		-E3-X3	V		+UPS2&EFS/8.2
			W		-E3-X3	W		+UPS2&EFS/8.2
					-L13	2		
	+MBC1-X5	2W	W		-E3-X3	W		+UPS2&EFS/8.2
			N		-E3-X3	N		+UPS2&EFS/8.3
	+MBC1-X5	2N	N		-E3-X3	N		+UPS2&EFS/8.3

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Stat	Alteration	Date	Name		
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				Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+UPS2-E3-X3
Protect 8.33 40-400-210-400

Terminal diagram

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Terminal diagram

terminal
=+UPS2-E4-X4

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U		-E4-X4	U			+UPS2&EFS/8.6
						-A3-X4	1			
		+MBC1-X4	2U	U		-E4-X4	U			+UPS2&EFS/8.6
				V		-E4-X4	V			+UPS2&EFS/8.6
						-A3-X4	2			
		+MBC1-X4	2V	V		-E4-X4	V			+UPS2&EFS/8.6
				W		-E4-X4	W			+UPS2&EFS/8.6
						-A3-X4	3			
		+MBC1-X4	2W	W		-E4-X4	W			+UPS2&EFS/8.6
				N		-E4-X4	N			+UPS2&EFS/8.6
		+MBC1-X4	2N	N		-E4-X4	N			+UPS2&EFS/8.6
		+MBC1-X4	2N	N		-E4-X4	N			+UPS2&EFS/8.6

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		Date	23.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS
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Stat	Alteration	Date	Name	Norm	

Terminal diagram =+UPS2-E4-X4
Protect 8.33 40-400-210-400

Terminal diagram

1000007888_010 en

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+ UPS2
& EMA

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sheets 24

CAE EPLAN Electric P8

Terminal diagram

terminal
=+UPS2-F120

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		-K10	A1	1		-X120	1			+UPS2&EFS/22.7

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+UPS2-F120
Protect 8.33 40-400-210-400

Terminal diagram

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+ UPS2
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sheets 24

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-F121

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		-K10	A2	1		-X120	2			+UPS2&EFS/22.8

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Stat	Alteration	Date	Name	Norm	

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Terminal diagram =+UPS2-F121
Protect 8.33 40-400-210-400

Terminal diagram

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+ UPS2
& EMA

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sheets 24

CAE EPLAN Electric P8

Terminal diagram

terminal
=+UPS2-PE

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+MBC1-PE	PE	PE						+UPS2&EFS/4.3
				PE						+UPS2&EFS/8.4
				PE						+UPS2&EFS/1.4

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Terminal diagram

terminal

=+UPS2-X12

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1		-A92.1-X3	4			+UPS2&EFS/11.5
				2		-A92.2-X10	2			+UPS2&EFS/11.5
				3		-A92.2-X10	3			+UPS2&EFS/11.5
		-A24.1-X1	+	4	'	-A92.1-X20	2			+UPS2&EFS/11.7
		-A24.1-X1	-	5	'	-A92.1-X20	1			+UPS2&EFS/11.7
				6		-CU	N			+UPS2&EFS/14.7
				7		-A9-A16-X8	5			+UPS2&EFS/14.2
				8		-A9-A16-X8	4			+UPS2&EFS/14.2
				9	●	-A9-A16-X8	6			+UPS2&EFS/14.2
				10		-A9-A50-X8	1			+UPS2&EFS/12.3
				11		-A9-A50-X8	2			+UPS2&EFS/12.3
						-Q3	96			
				12	●	-A9-A16-X8	7			+UPS2&EFS/14.2
				15		-A9-A50-X8	3			+UPS2&EFS/12.3
						-Q3	95			

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Stat	Alteration / Date / Name	Norm			

Terminal diagram =+UPS2-X12
Protect 8.33 40-400-210-400

Terminal diagram

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+ UPS2
& EMA

A3

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sheets 24

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-X13

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+MBC1-X14	U	U		-F100	1:2			+UPS2&EFS/23.2
		-X14	U	U						+UPS2&EFS/23.3
		+MBC1-X14	N	N		-A85-X1	2			+UPS2&EFS/23.3
		-X14	N	N						+UPS2&EFS/23.3
				PE						+UPS2&EFS/23.3
				PE						+UPS2&EFS/23.3

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Terminal diagram =+UPS2-X13
Protect 8.33 40-400-210-400

Terminal diagram

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sheets 24

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-X14

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		-X13	U	U		-F110	1:2			+UPS2&EFS/23.7
				U						+UPS2&EFS/23.7
		-X13	N	N		-X114	N			+UPS2&EFS/23.7
				N						+UPS2&EFS/23.7

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Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS2-X14
Protect 8.33 40-400-210-400

Terminal diagram

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+ UPS2
& EMA

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sheets 24

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-X15

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1		-A9-A50-X8	4			+UPS2&EFS/12.6
				1		-C711				+UPS2&EFS/12.7
				2		-C712				+UPS2&EFS/12.7
		+MBC1-X15	6	2		-A9-A50-X5	5			+UPS2&EFS/12.8
		+MBC1-X15	7	3		-A9-A50-X5	6			+UPS2&EFS/12.8

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Stat	Alteration Date Name	Norm			

Terminal diagram =+UPS2-X15
Protect 8.33 40-400-210-400

Terminal diagram

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sheet 22
sheets 24

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Terminal diagram

terminal
=+UPS2-X114

Cable name			Cable name	-W100		
Cable type			Cable type	H05VV 2x1 mm²		
Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Position / Page
		N		-H1	N	+UPS2&EFS/23.7
				-X14	N	
		U		-H1	L	+UPS2&EFS/23.7
				-F110	1	

CAE EPLAN Electric P8

Terminal diagram

terminal
=+UPS2-X120

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1	'	-F120	1:1			+UPS2&EFS/22.7
				2	'	-F121	1:1			+UPS2&EFS/22.8

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AEG POWER SOLUTIONS

Terminal diagram =+UPS2-X120
Protect 8.33 40-400-210-400

Terminal diagram

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A3

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sheets 24

Base Load Power Hub (BLPH)

AC UPS PAS - TAG: UP-200F3
EQUIPMENTS LIST & BILL OF MATERIAL

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Position	Mat.-No.	Quantity	Description
A2-C86.1 A2-C86.2 A9-A17-C303 A9-A17-C304	40000055 old: 0015709	7	Capa 0,01µF 20% 250VAC R15 UL
A1-C85.1 A1-C85.2 A1-C85.3 A1-C85.4 A1-C85.5 A1-C85.6	40000065 old: 8000011087	7	Kond Y2 0,047µF 300VAC RM20,3 UL
A105-A105	20001913 old: 8000016184	1	261 SBS Voltage matching 3ph.
A10-K7	40000468 old: 8000032332	1	Auxiliary switch CAL4-11 f.AF09-AF96 KTA
A10-K7	40002624 old: 8000053782	1	TP-cont. AF40-30-00-11 24-60VUC
A10-T21 A10-T22 A10-T23	40000340 old: 0047690	3	Transformer through WSW 60/0,06 A
A11-C101	40007994 old: 0015558	3	CAPA 0,47µF 440VAC/600VDC GPF axial
A11-Q1	40000469 old: 8000044745	1	Disconnector XT1D160 3-pol. 160A
A11-Q1	40000471 old: 8000044747	1	Shunt opening release 24-30VUC f.XT1-XT4
A13	20001839 old: 1000002579	1	619 Add.Remote signal. option-2 f. UPS
A18-A18	40000227 old: 8000024183	1	Graphic-DOU 2B
A1-A80 A1-A81	20001090 old: 8000023368	2	261 Rectifier-Trigger
A1-A82 A1-A83	20001091 old: 8000025394	2	261 PCB Rectifier/SBS Snubber
A1-R100 A1-R101 A2-R100 A3-R100 A4-R100	40000389 old: 8000001495	5	Temperature Sensor 10 kOHM NTC KTA
A1-T80 A1-T81 A1-T82 A1-T83	40000166 old: 0016902	4	Current transf. WSW150 150/0,1A KTA/UL

Position	Mat.-No.	Quantity	Description
A1-V1 A1-V2 A1-V3 A1-V4 A1-V5 A1-V6 A3-V31 A3-V33 A3-V35 A4-V31 A4-V33 A4-V35	40000388 old: 8000001373	12	TT-MODULE 92 N 16 KOF UL
A20-A20	20000244 old: 8000023378	1	261 parallel adapter - P8
A24.1-A24.x	20000414 old: 8000057818	1	261 BLÜ-PRO 110 - 480V (Assembly)
A24.1-F9x F120 F121	40008113 old: 0014094	3	Fuse 6,3x32 F 3,15 440V
A2-A1	20000234 old: 8000021689	1	261 Trigger circuit-3ph. P8
A2-C42	40000418 old: 8000022371	6	CAPA AL 6000µF 315VDC77x105 M12 KTA
A2-R42 ETHDI-R23 ETHDI-R24 ETHDI-R25	40000363 old: 05507	9	resistor 47K 5% DC 9X38 UL KTA
A2-V11 A2-V12 A2-V13	40000413 old: 8000014874	3	TRANS..IGBT 400A 600V TAB-0,5
A3-A36 A4-A36	20001092 old: 8000028563	2	261 SBS-trigger circuit 3p NPP
A3-A37 A4-A37	20000289 old: 8000028996	2	261 SBS Snubber 3-Ph.
A6-E1	20000255 old: 8000024856	1	EMC-Filter E1 P8 3-pole 350A o. N
A6-E2	20000204 old: 8000018882	1	EMC-Filter E2 P8 2-pol. 400A f. middelr.
A6-E3 A6-E4	20000287 old: 8000028669	2	EMC-Filter E3/E4 P8.33 4-pole 350A w/N
A7-C4-C6	40000170 old: 0022847	3	Capa 57 µF -5..+15% 440VAC M12
A7-C4-C6	40000295 old: 0016765	3	Capa 33 µF 10% 400VAC 45x145+14 M12
A80-A8x A81-A8x	20000495 old: 8104070	2	261 suppression 500V 6P UL
A80-C8x A81-C8x	40006967 old: 05318	2	CAPA 4µF850VDC HSF30x85/97 6,3x0,8 M8
A85-A85	40020098	1	Heater 100W 110-250VAC/DC 50/60Hz NPP

Position	Mat.-No.	Quantity	Description
A85-F100 H1-F110	40007171 old: 0048663	2	G-fuse link 6,3x32 M/T 6,3 A 500VAC
A85-F85	40007478 old: 0027233	1	Thermostat 10°C up to 60°C
A8-A91.1+2	20000243 old: 8000022841	2	261 Fan Control - P8
A8-A92.1+2	20000245 old: 8000023512	2	261 Fuseboard - P8 KTA
A8-A92.1-F1 A8-A92.1-F2 A8-A92.1-F3 A8-A92.2-F1 A8-A92.2-F2 A8-A92.2-F3 A8-A92.2-F6 A8-A92.2-F7 A8-A92.2-F8	40000167 old: 0017037	9	Fuse 6,3X32 F 5 A 500VAC
A8-A92.1-F4 A8-A92.1-F5 A8-A92.2-F4 A8-A92.2-F5	40000185 old: 0050038	4	G-fuse 6,3X32 F 4 A 440 V KTA/UL
A8-A92.1-F6	40003889 old: 8000030370	1	Fuse 6,3X32 T 8 A 500 VAC KTA
A8-A92.1-F9	40007485 old: 0027059	1	G-fuse link 6,3x32 M 2 A 500V
A8-M1-M6	40000171 old: 0028612	6	Fan 230VAC 50/60Hz W2S130-AA03-21 UL
A9-A12	20000440 old: 8000062777	1	261 Remote Signalling 2 4xPanel
A9-A16	20000239 old: 8000022378	1	261 SBS Interface P8 3-Phase
A9-A16-A1	20004879 old: 8000066264	1	261 SBS ControllerBoard STM32 V2018
A9-A17	20000240 old: 8000022441	1	261 Inverter Interface P8 3-Phase
A9-A17-A1	20004877 old: 8000066260	1	261 Inv. ControllerBoard STM32 V2018
A9-A29.1	20004850 old: 8000065585	1	261 Multi CAN-Communication 2 *4xPanel*
A9-A50	20000235 old: 8000022025	1	261 Rectifier Interface P8
A9-A50-A1	20004878 old: 8000066262	1	261 Rec. ControllerBoard STM32 V2018
C100.1 C100.2 C100.3 C100.4	40000168 old: 0018271	4	CAPA 2µF 440VAC/600VDC FAPB 40X50 M8 KTA
ETHDI	20011618 old: 8000059823	1	THDI-Filter-L20 P8-S10 40kVA 400V/50Hz

Position	Mat.-No.	Quantity	Description
ETHDI-C23 ETHDI-C24 ETHDI-C25	40007583 old: 0023326	3	CAPA 32 µF -5..+10 % 525 VAC
ETHDI-L22 (S10)	40011044 old: 8000061064	1	Choke TP 4,7kVA
ETHDI-L23 ETHDI-L24 ETHDI-L25	40011043 old: 8000061063	3	922 Choke P040/550Hz/2,62mH
ETHDI-Q3	40004801 old: 8000020429	1	Circuit breaker 3-pole 25A S203 C25
ETHDI-Q3	40005215 old: 8000015407	1	Signal cont. /auxil. ABB S200 1cha. over
ExBatterySensor	40013096 old: 8000062749	1	EX d Temperature Sensor NTC10k
F1 F2 F3	20000023 old: 1000001482	3	Option UPS output fuse 63A-C2
H1-H1	40002071 old: 8000062885	1	Magnet cubicle light 100-240V 50-60Hz 4W
K10	40013233 old: 8000068651	1	Relay PSR-SCP- 24DC/ESP4/2X1/1X2
L11 L12 L13	40000273 old: 9096652	3	AC-parallelchoke 60A LV6007
L41	40000226 old: 8000022103	1	DC-choke L41 P8.31/40-216
L85.1 L85.2 L87.1 L87.2	40000176 old: 0047653	4	Toro. core 42X26X25 10000nH
L86.1	40000182 old: 0047828	2	Toroidal core 61X 40X 18 5400nH KTA/UL
Q1MCCB	40002120 old: 8000062259	1	CB XT1S160 3P 100A TMD #067434
T1	40000243 old: 8000028383	1	910 Transf. 3~ T1 P8.33/040-216-400
T11 T12 T13 T85	40000175 old: 0047197	4	Current transducer HTA-200S
T40	40013398 old: 8000070910	1	TP-transf. T40 P8.31/040-400-216 VE
Trip Battery MCCB-C711,C712	40000213 old: 8000008820	2	CAPA AL220000µF 25VDC M12 Stud

AEG POWER SOLUTIONS	**Parts list** Bypass Trans. Cabinet 40kVA 400/400V	BY-200F3 DP-200F3	Rev. 02 Page 1 of 1

Position	Mat.-No.	Quantity	Description
A85	40020098	1	Heater 100W 110-250VAC/DC 50/60Hz NPP
A90	40002519 old: 8000055525	1	current.meas. relay >I< 5/10A EMD-BL-C10
C31,C32	40007201 old: 0048405	2	CAPA X2 0,047µF 250VAC radial UL
F10...F19	40008113 old: 0014094	10	Fuse 6,3x32 F 3,15 440V
F100,F110	40007171 old: 0048663	2	G-fuse link 6,3x32 M/T 6,3 A 500VAC
F100,F110,F211,F212	40007024 old: 0087200	4	terminal fuse UK 6,3-HESI 6,3x32 10A
F211,F212	40006024 old: 8000005364	2	G-FUSE LINK 6,3X32 M/T 1,6A 500VUL
F24,F26	40000167 old: 0017037	2	Fuse 6,3X32 F 5 A 500VAC
F24,F26	40005363 old: 8000013962	10	Terminal fuse UK 10-DREHSI 6,3x32 10A
F25	40020351	1	lightning current arrestor VPU I3 R 400V
F85	40007478 old: 0027233	1	Thermostat 10°C up to 60°C
H1	40002071 old: 8000062885	1	Magnet cubicle light 100-240V 50-60Hz 4W
K1,K2	40005511 old: 8000011691	2	Relay PLC 230VUC 1W 6mm NR2966207
K10...K14	40013233 old: 8000068651	5	Relay PSR-SCP- 24DC/ESP4/2X1/1X2
M1,M2	40015035	2	Fan 230VAC 50/60Hz 148VK0281030 UL
Q10	40001344 old: 8000068250	1	CB XT1S160 3P 80A TMD
Q28.1,Q28.2,Q71,Q72	40002052 old: 8000063609	4	Fuse ld. sw. 3 pole size NH00 160 A KETO
Q28.1,Q28.2,Q71,Q72	40012684 old: 8000069685	12	KNIFE LINK NH00 250A NPP
Q29	40014823 old: 8000019447	1	3-P.CHANGE-OVER SWITCH NO ZERO POS. C 80
QF31...QF33	40021027	3	RCBO 1P+N 32A B 300mA 10kA DS201A
QF31...QF52	40005215 old: 8000015407	22	Signal cont. /auxil. ABB S200 1cha. over
QF34...QF36 QF39,QF40	40019348	5	Shunt trip 110-415VAC/250VDC F2C-A2
QF34...QF38	40021028	5	RCBO 1P+N 16A B 300mA 10kA DS201A
QF39...QF42	40021029	4	RCBO 1P+N 10A B 300mA 10kA DS201A
QF43...QF50	40004921 old: 8000019136	8	Circuit breaker 2-pole 10A S202 B10
QF51,QF52	40006202 old: 8000002872	2	Circuit breaker 2-pole 6A B S202
T8	40012492 old: 8000062054	1	TP-Isol. Transf. 415/415V 40kVA ±2,5%

27.08.2024 **Schrewe**			

Base Load Power Hub (BLPH)

AC UPS F&G - TAG: UP-200F4
WIRING DIAGRAM & TERMINAL SCHEDULE

This document undergoes an issuance cycle within EDMS Fusionlive". Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

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AEG

POWER SOLUTIONS

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Project name	1000007888_080
Customer	ROSETTI MARINO
Key word	Hollandse Kust Noord (HKN) wind farm

System	AC UPS F&G - TAG: UP-200F4
Systems Type	System 20 kVA
Responsible for project	Ch.Peck

Created on	03.06.2024	from	Beckschäfer
Last Revision	27.08.2024	from	Beckschäfer

Number of pages 133

1000007888_080

				Date	03.06.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	System 20 kVA Title page/Cover page	=
				Editor	Beckschäfer				+
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Stat	Alteration	Date	Name	Norm					A3

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		3	Table of contents	System 20 kVA	Beckschäfer	01	13.08.2024	Beckschäfer
		4	Table of contents	System 20 kVA	Beckschäfer	01	13.08.2024	Beckschäfer
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	UPS1	9	Circuit diagram	Inverter output contactor	EEC			
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Structure identifier overview

Full designation	Labeling	Structure description
+BAT1	Installation location	Battery cabinet
+BAT2	Installation location	Battery cabinet
+MBC1	Installation location	Bypass transformer cabinet with manual bypass 20 kVA
+UPS1	Installation location	Protect 8.33 20-400-204-400
+UPS2	Installation location	Protect 8.33 20-400-204-400
&EAA	Document type	Title page/Cover page
&EAB	Document type	Table of contents
&EDB	Document type	Structure identifier overview
&EFA	Document type	Single-line diagram
&EFS	Document type	Circuit diagram
&EMA	Document type	Terminal diagram

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				Date	03.06.2024			=	
				Editor	Beckschäfer	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	System 20 kVA	+
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AUXILIARY
From Lighting & Small Power DB BOP DP-200N1 (Cubicle 03-Q42)
100-240V/N/PE~50/60Hz

back-up fuse
gG10A
3G2.5mm2

LINE A
From LV Switchgear SG-200N1 (Cubicle A6/05)
Mains
400V;3/PE~50Hz

gG80A
4G35mm2

From LV Switchgear SG-200N1 (Cubicle A2/04)
Bypass mains
400V;3/PE~50Hz

gG63A
4G35mm2

LINE B
From LV Switchgear SG-200N1 (Cubicle A6/06)
Mains
400V;3/PE~50Hz

gG80A
4G35mm2

Not included in the AEG shipment

+MBC1
BY-200F4
Bypass-Trafoschrank mit HU 20 kVA
1000007888.090
10009760

-X1 1U,1V,1W,PE
-X10 U,V,W,PE
-X13 U,N,PE
-X14 U,N
-X1 3U,3V,3PE
1.3 / B → B / 1.8
-A85
-H1
-Q10 L=50/35A I=0,5kA Icu=50kA
-T8 400V/400V/ 20kVA
-Q28.1 NC
-Q28.2 NC
-X1 2U,2V,2W,PE
-X4 1U,1V,1W,1N,PE
-X4 2U,2V,2W,2N,PE
-X1 4U,4V,4W,PE

Code	Description
Q1	Rectifier input mains breaker
T40	Rectifier input isolation transformer
A1	Rectifier
A2	Inverter
T1	Inverter output isolation transformer
A3-A4	Static by-pass switch
A18	Display control module
A85	Heater
H1	Light

*2 → B / 1.6

+UPS1
BC-200F4A
Protect 8.33 20-400-204-400
1000007888.080
10009759

-X13 U,N,PE
-X14 U,N
-A85
-H1
-E1-X1 U,V,W,PE
-E4-X4 U,V,W,N,PE
-Q1 L=100/85A I=1,0kA Icu=50kA
-T40
-A1 REC
-A2 INV
-T1
-F1,-F2,-F3
-A18
Display
-A20
Parallel Adapter
INV CAN -X3 1-3 → 203 / 1.6
INV Sync -X5 1-4 → 205 / 1.6
-A3 SBS
-A4
-L11,-L12,-L13
Parallel preventive choke coil
-A12 ,-A13
Remote signaling
-A24.1 BLÜ-PRO -F91
-A24.2 BLÜ-PRO -F92
-A24.3 BLÜ-PRO -F93
-E2-X2 L-,L+,PE
-X15 2,3
-X130 1,2
-E3-X3 U,V,W,N,PE

+UPS2
BC-200F4B
Protect 8.33 20-400-204-400
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1.5 / 203 → -X3 1-3 INV CAN
1.5 / 205 → -X5 1-4 INV Sync
1.7 / B

-X2 1L+,1L-,PE
-X15 2,3
-X91 1M
-X92 1M
-X93 1M
-X5 1U,1V,1W,1N,PE
-X5 2U,2V,2W,2N,PE
-X2 3L+,3L-,PE
-X15 6,7
-X91 3M
-X92 3M
-X93 3M
-X2 2L+,2L-,PE
-X15 4,5
-X91 2M
-X92 2M
-X93 2M
-X130 1,2,1PE
-X2 4L+,4L-,PE
-X15 8,9
-X91 4M
-X92 4M
-X93 4M
-X130 3,4,2PE

-Q71 NC
-Q72 NC
A / 1.6
1.5 / A
INV operation
Manual bypass
-Q29
-F25
DP-200F4
-QF31 B16A 300mA
5pc
-QF35 B16A 300mA
-QF36 B10A
3pc
-QF38 B10A
-X31 U,N,PE
-X35 V,N,PE
-X36 W,N,PE
-X38 V,N,PE

Not included in the AEG shipment

max. gG10A
max. gG10A
Load
400/230V;3/N/PE~50Hz

2(1x70 mm2)

+BFB1
CB-200F4A
Battery fuse box 200 A
*1
-Q2 L=200A
DC 24V
max. 300W

+BFB2
CB-200F4B
Battery fuse box 200 A
*1
-Q2 L=200A
DC 24V
max. 300W

+BAT1
BA-200F4A
Batteries installed on rack
3 x 18 x FTG 12-120
Battery voltage 216V
Battery capacity 360Ah
string 1
String 2
String 3
-R81 **

+BAT2
BA-200F4B
Batteries installed on rack
3 x 18 x FTG 12-120
Battery voltage 216V
Battery capacity 360Ah
string 1
String 2
String 3
-R81 **

*1 Attention! In the event of battery undervoltage < 130 V, the UPS automatically switches off battery isolator Q2.
If this happens, switch X15:3 must be switched into the open position (undervoltage trip blocked).
For restart, please refer to the chapter in the UPS operating instructions (charging the DC link capacitors) attached.
Unlock the tripped switch Q2 by switching to open position.
After charging the DC link capacitors, switch on Q2.
Attention! When the battery voltage reaches > 200 V, switch X15:3 must be switched back to the closed position.

*2 Connection cables are not included.

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REC mains

UPS1

Top entry

-X1 1U 1V 1W

-PE

PE busbar

Cu 40x5 mm

Door

GNYE 6 mm²

Rack

Rack

BK R16 mm²

BK R16 mm²

BK R16 mm²

GNYE R35 mm²

Bottom entry

-PE

Cu 40x5 mm

-X1 2U 2V 2W

+UPS1

Protect 8.33 20-400-204-400

1000007888.080

10009759

GZ1_1 +UPS1/1.2

GZ1_2 +UPS1/1.2

GZ1_3 +UPS1/1.2

REC mains

UPS2

Top entry

-X1 3U 3V 3W

-PE

BK R16 mm²

BK R16 mm²

BK R16 mm²

Bottom entry

-PE

-X1 4U 4V 4W

+UPS2

Protect 8.33 20-400-204-400

1000007888.080

10009759

GZ1_1

GZ1_2

GZ1_3

1000007888_080

				Date	28.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	REC mains Bypass transformer cabinet with manual bypass 20 kVA Circuit diagram	=
				Editor	Beckschäfer				+ MBC1
				Checked	Ch.Peck			1000007888.090 10009760	& EFS
Stat	Alteration	Date	Name	Norm				1000007888_080 en	A3 sheet 1 / sheets 11

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+UPS1
Protect 8.33 20-400-204-400
1000007888.080
10009759

GZ2_1 +UPS1/4.3
GZ2_2 +UPS1/4.2
GZ2_3 +UPS1/4.3
GZ15_2 +UPS1/12.8
GZ15_3 +UPS1/12.8
GZ91_1 +UPS1/18.3
GZ92_1 +UPS1/18.7
GZ93_1 +UPS1/19.3
GZ130_1 +UPS1/12.2
GZ130_2 +UPS1/12.2

-W208
LiYCY 3x0,5 mm²
WH
BN

Bottom entry
-X2 1L+
1L-
-PE
-X15 2
3
-X91 1M
-X92 1M
-X93 1M

BK R70 mm²
BK R70 mm²
BK R2,5 mm²
BK R2,5 mm²
BK R2,5 mm²
BK R2,5 mm²
BK R2,5 mm²

Top entry
-X2 2L+
2L-
-PE
-X15 4
5
-X91 2M
-X92 2M
-X93 2M

Battery fuse

Battery MCCB
Shunt opening release

Battery central tapping

Top entry
-X130 1
2
OG 1,5 mm²
1PE

+BAT1
Battery cabinet
-R81
-X1 1
2

1000007888_080

			Date	28.05.2024	
			Editor	Beckschäfer	
			Checked	Ch.Peck	
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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

GR-Ausgang UPS1
Bypass transformer cabinet
with manual bypass 20 kVA
Circuit diagram

1000007888.090
10009760

1000007888_080 en

=
+ MBC1
& EFS

A3

sheet 2
sheets 11

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+UPS2
Protect 8.33 20-400-204-400
1000007888.080
10009759

GZ2_1 GZ2_2 GZ2_3 GZ15_2 +UPS2/12.8 GZ15_3 +UPS2/12.8 GZ91_1 +UPS2/18.3 GZ92_1 +UPS2/18.7 GZ93_1 +UPS2/19.3 GZ130_1 +UPS2/12.2 GZ130_2 +UPS2/12.2

-W209
LiYCY 3x0,5 mm²
WH BN

Bottom entry
-X2 3L+ 3L- -PE
-X15 6 7
-X91 3M
-X92 3M
-X93 3M

BK R70 mm² BK R70 mm² BK R2,5 mm² BK R2,5 mm² BK R2,5 mm² BK R2,5 mm² BK R2,5 mm²

Top entry
-X2 4L+ 4L- -PE
-X15 8 9
-X91 4M
-X92 4M
-X93 4M

OG 1,5 mm²
Top entry
-X130 3 4 2PE

Battery fuse

Battery MCCB
Shunt opening release

Battery central tapping

+BAT2
Battery cabinet
-R81
-X1 1 2

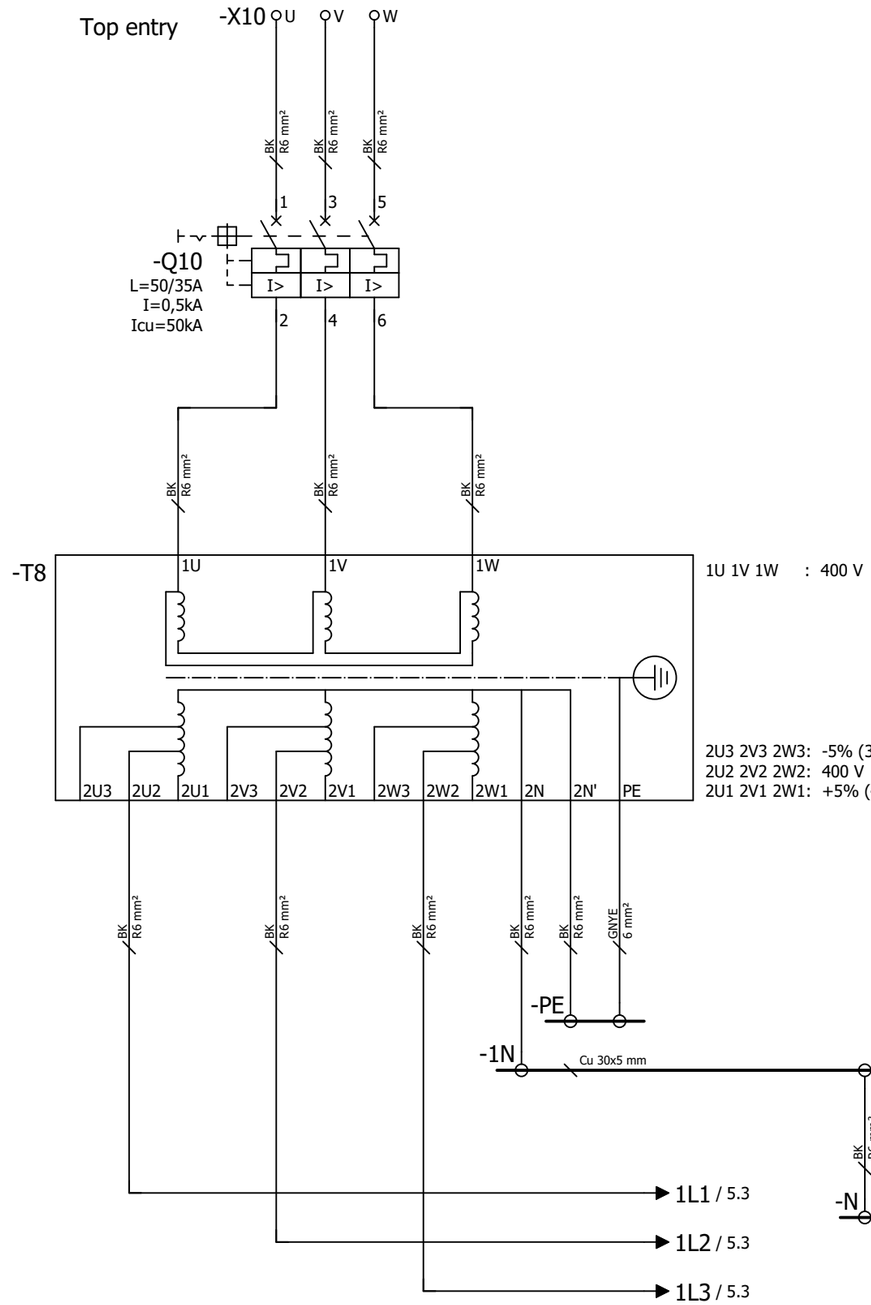
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				Date	28.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	GR-Ausgang UPS2 Bypass transformer cabinet with manual bypass 20 kVA Circuit diagram		=	
				Editor	Beckschäfer					+ MBC1	
				Checked	Ch.Peck				1000007888.090 10009760	& EFS	A3 sheet 3
Stat	Alteration	Date	Name	Norm					1000007888_080 en		sheets 11

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Mains
400V;3/PE~50Hz

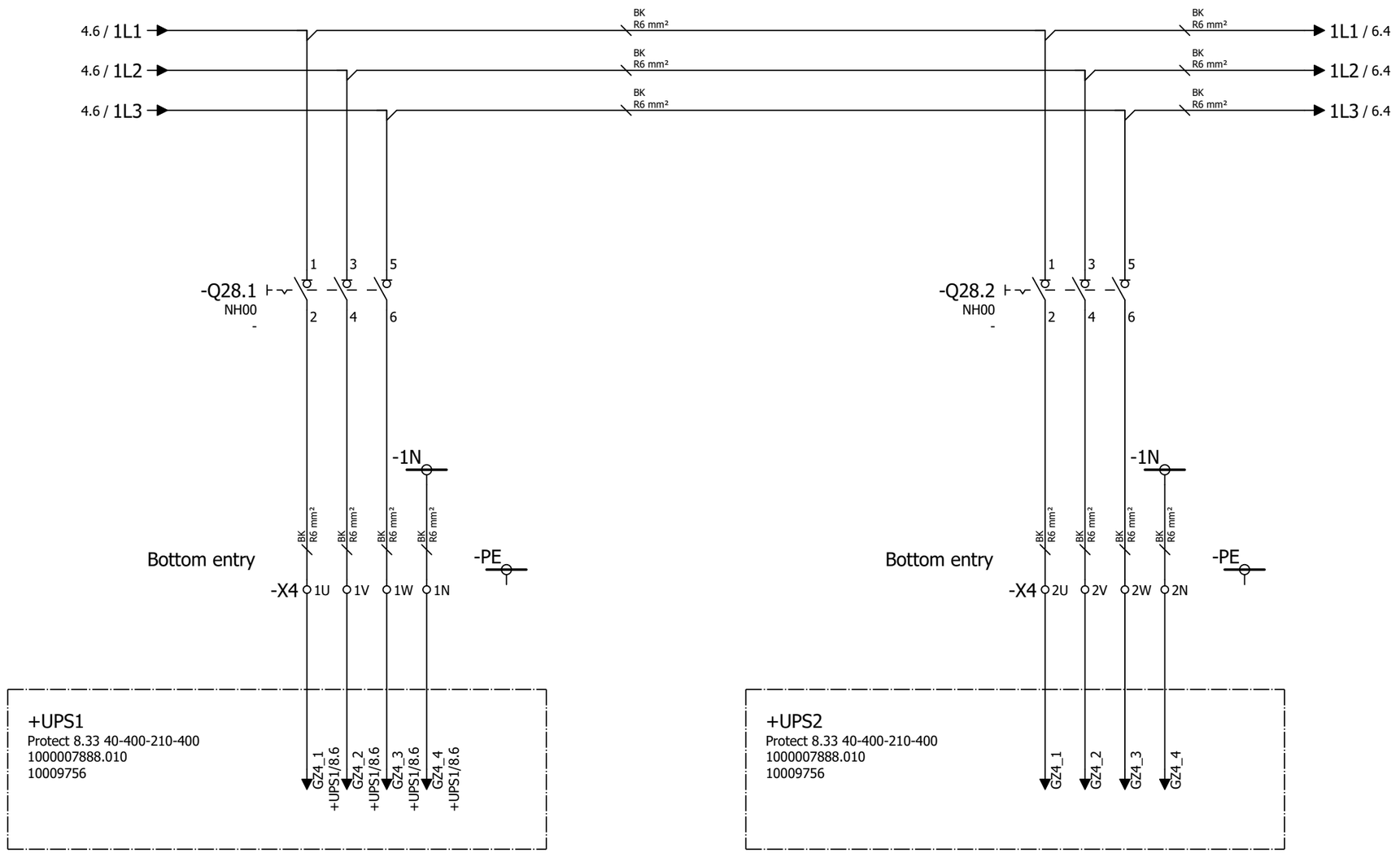


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				Date	28.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Bypass Transformator Bypass transformer cabinet with manual bypass 20 kVA Circuit diagram		=
				Editor	Beckschäfer					+ MBC1
				Checked	Ch.Peck			1000007888.090 10009760	1000007888_080 en	& EFS
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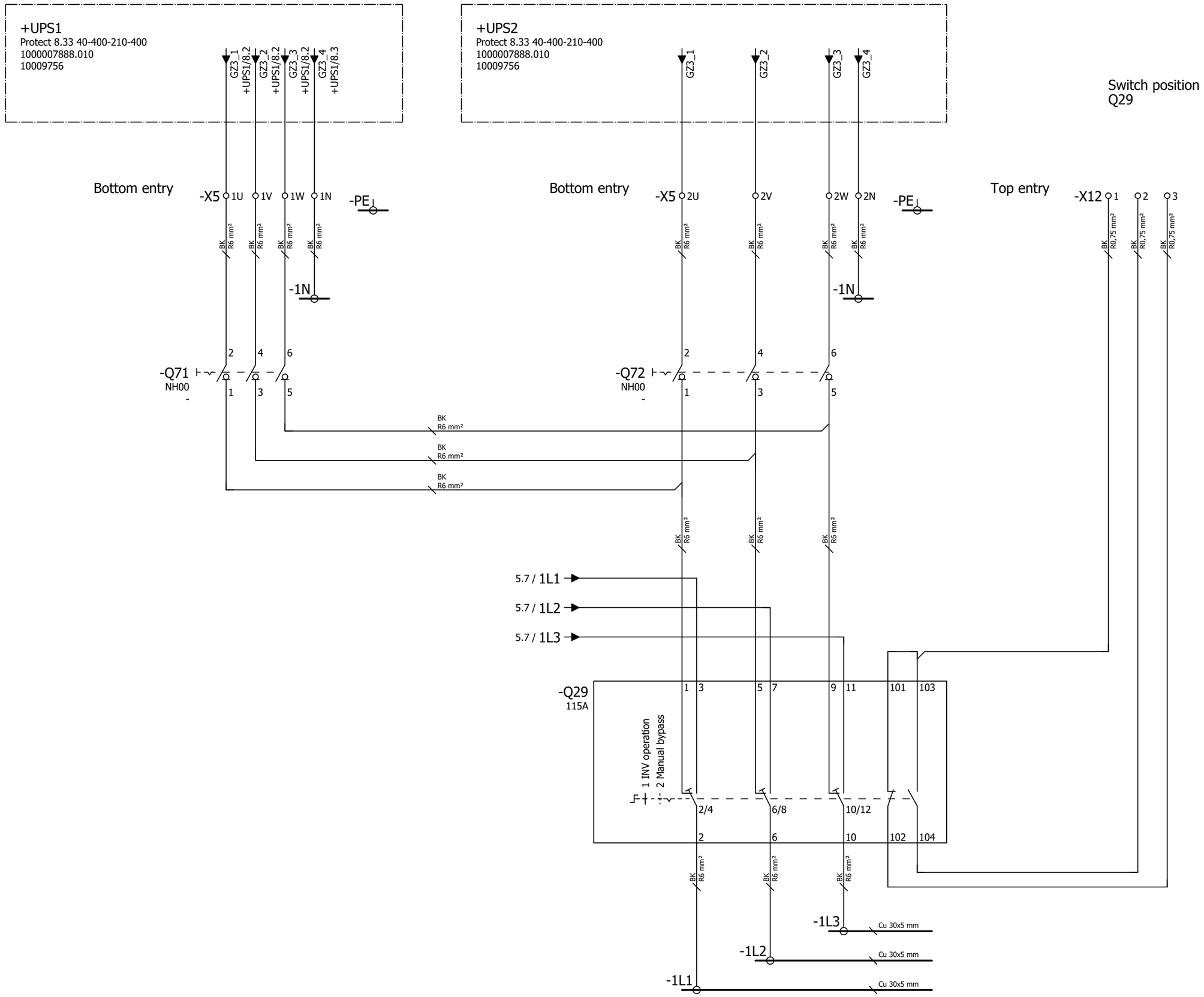
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				Date	28.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	SBS mains Bypass transformer cabinet with manual bypass 20 kVA Circuit diagram	=
				Editor	Beckschäfer				+ MBC1
				Checked	Ch.Peck			1000007888.090 10009760	& EFS
Stat	Alteration	Date	Name	Norm				1000007888_080 en	A3 sheet 5 / sheets 11

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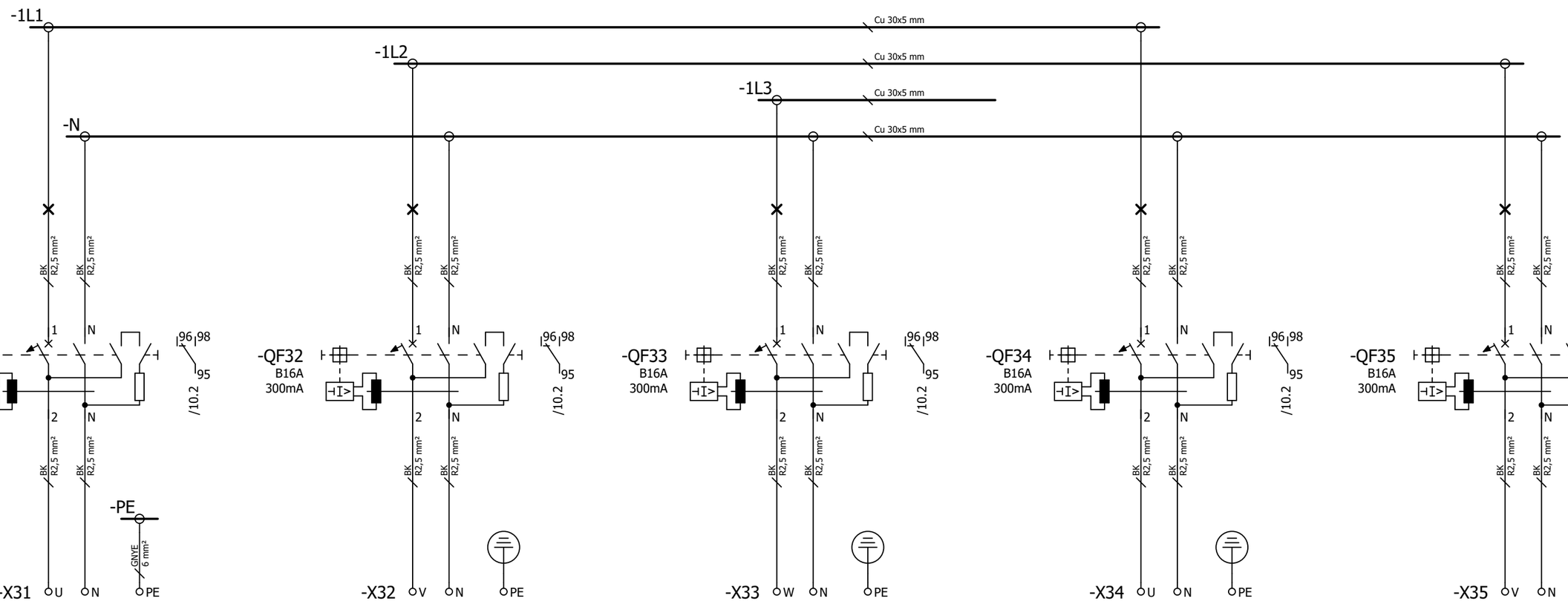
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				Date	28.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Manual bypass Bypass transformer cabinet with manual bypass 20 kVA Circuit diagram	=
				Editor	Beckschäfer				+ MBC1
				Checked	Ch.Peck			1000007888.090 10009760	1000007888_080 en / & EFS / A3 / sheet 6 / sheets 11
Stat	Alteration	Date	Name	Norm					

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Load
230V/N/PE~50Hz

B400-FGS-001
FGS PANEL LINE A
2KW

Load
230V/N/PE~50Hz

B400-FGS-001
FGS PANEL LINE B
2KW

Load
230V/N/PE~50Hz

SPARE
2KW

Load
230V/N/PE~50Hz

SPARE
2KW

Load
230V/N/PE~50Hz

SPARE
2KW

1000007888_080

				Date	28.05.2024
01	500000002053	13.08.2024	Beckschäfer	Editor	Beckschäfer
02	500000002089	27.08.2024	Beckschäfer	Checked	Ch.Peck
Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Load
Bypass transformer cabinet
with manual bypass 20 kVA
Circuit diagram

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10009760

1000007888_080 en

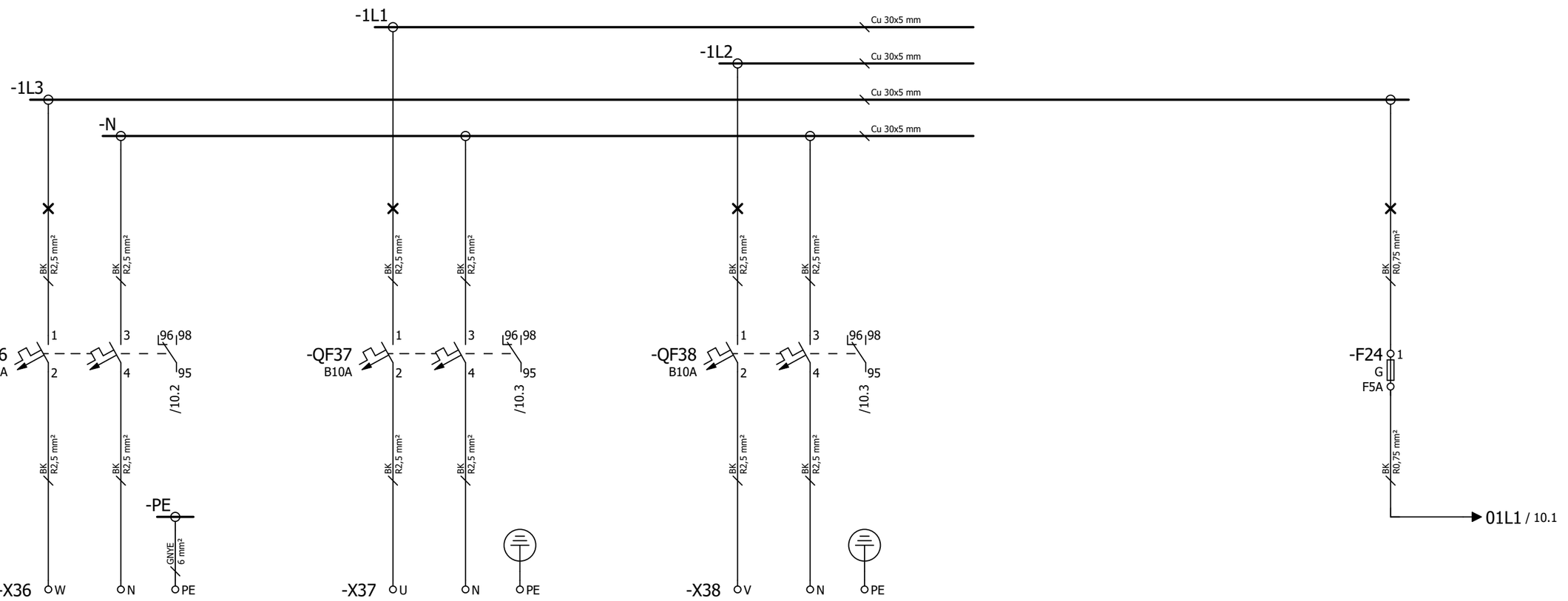
=
+ MBC1
& EFS

A3

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sheets 11

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Load
230V/N/PE~50Hz

B400-NET-01
NETWORK CABINET LINE A
1KW

Load
230V/N/PE~50Hz

B400-NET-01
NETWORK CABINET LINE B
1KW

Load
230V/N/PE~50Hz

SPARE
1KW

1000007888_080

				Date	28.05.2024
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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Load
Bypass transformer cabinet
with manual bypass 20 kVA
Circuit diagram

1000007888.090
10009760

1000007888_080 en

=
+ MBC1
& EFS

A3

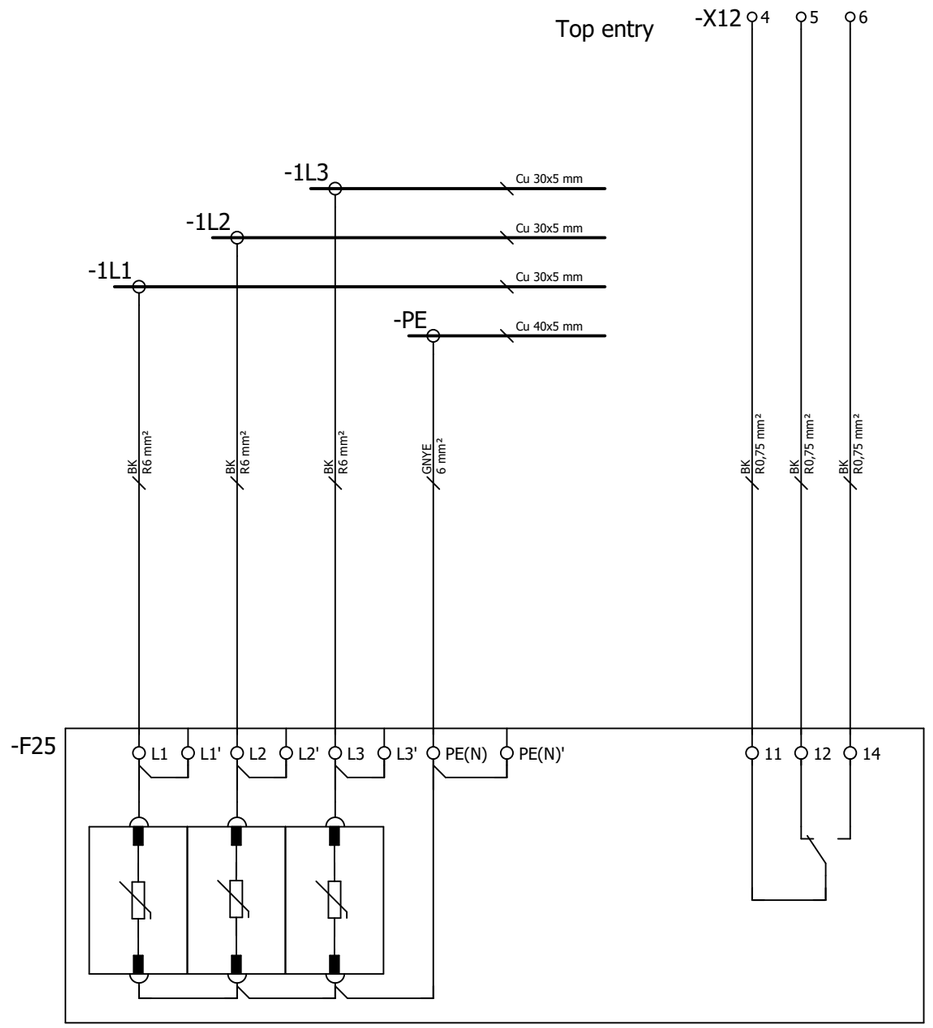
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status
Surge arrester

Top entry



1000007888_080

				Date	28.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Surge arrester Bypass transformer cabinet with manual bypass 20 kVA Circuit diagram		=
				Editor	Beckschäfer					+ MBC1
				Checked	Ch.Peck			1000007888.090		& EFS
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8.8 / 01L1

BK R0,75 mm²

-QF31
-QF32 /7.3
-QF33 /7.5
-QF34 /7.6
-QF35
-QF36 /8.2
-QF37 /8.3
-QF38 /8.4

96 98 / 95

BK R0,75 mm²

-K1
A1(+)
A2(-)

-N

Common fault

QF31 - QF38

Top entry

-X12 7 8 9

BK R0,75 mm²

11

-K1 /10.3

12 14

PXC.2966207_PLC-RSC-230UC/21

14 — 11 /10.7

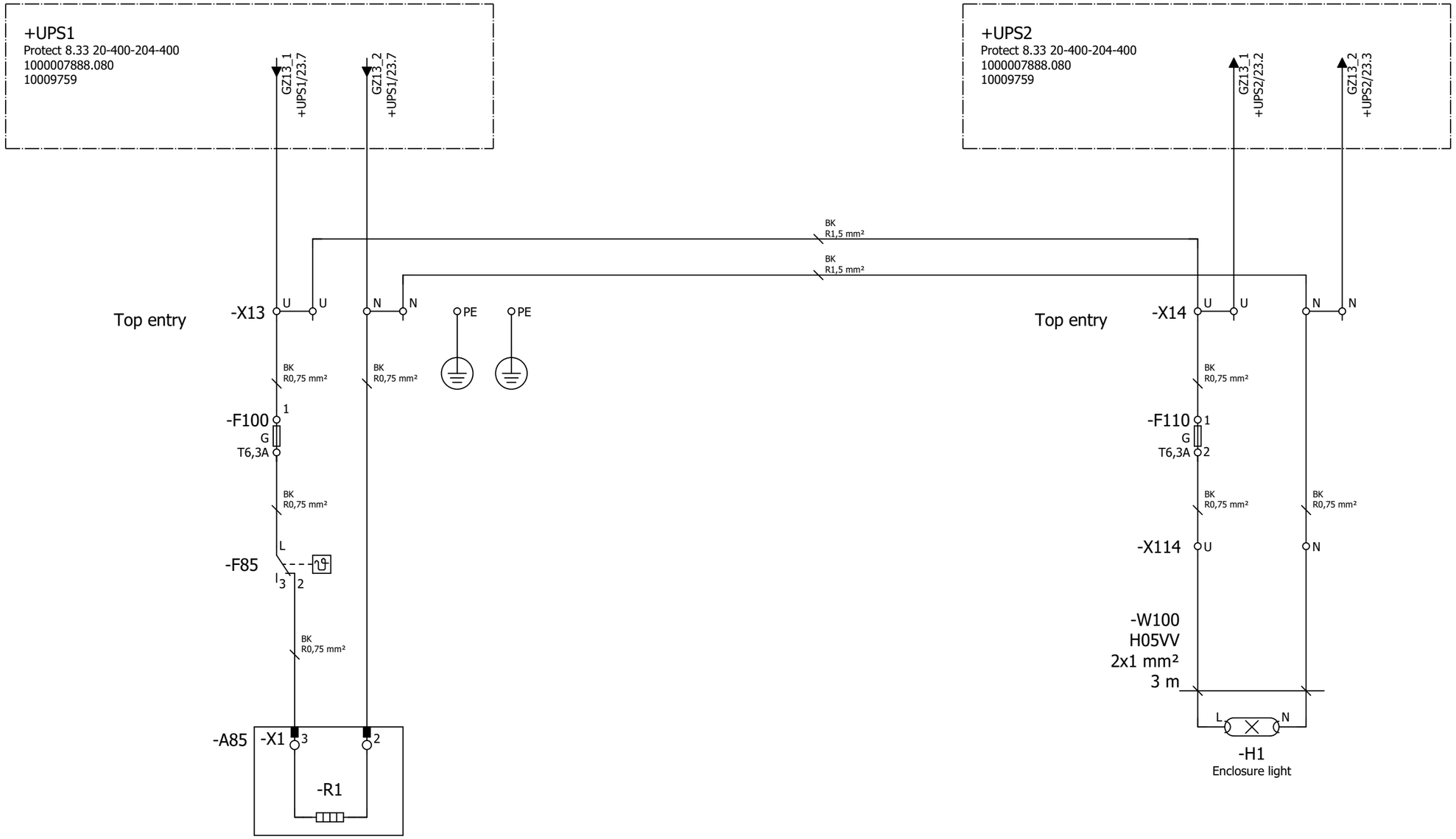
12

1000007888_080

				Date	28.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Common fault Bypass transformer cabinet with manual bypass 20 kVA Circuit diagram		=	
				Editor	Beckschäfer					+ MBC1	
01	500000002053	13.08.2024	Beckschäfer	Checked	Ch.Peck			1000007888.090	1000007888_080 en	& EFS	A3 sheet 10
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				Date	28.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	external connection Bypass transformer cabinet with manual bypass 20 kVA Circuit diagram	=
				Editor	Beckschäfer				+ MBC1
				Checked	Ch.Peck			1000007888.090 10009760	& EFS
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Terminal diagram

terminal

=+MBC1-PE

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				PE						+MBC1&EFS/1.3
				PE						+MBC1&EFS/1.3
				PE						+MBC1&EFS/1.6
				PE						+MBC1&EFS/1.6
		+UPS1-PE	PE	PE						+MBC1&EFS/2.3
				PE						+MBC1&EFS/2.3
				PE						+MBC1&EFS/3.3
				PE						+MBC1&EFS/3.3
				PE						+MBC1&EFS/5.4
				PE						+MBC1&EFS/5.7
				PE						+MBC1&EFS/6.3
				PE						+MBC1&EFS/6.6

1000007888_080

				Date	13.08.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Terminal diagram =+MBC1-PE Bypass transformer cabinet with manual bypass 20 kVA Terminal diagram		=	
				Editor	Beckschäfer					+ MBC1	
01	500000002053	13.08.2024	Beckschäfer	Checked	Ch.Peck				1000007888_080 en	& EMA	A3 sheet 1
Stat	Alteration	Date	Name	Norm							sheets 22

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Terminal diagram

terminal

=+MBC1-X1

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1U	'	-X1	2U			+MBC1&EFS/1.3
				1V	'	-X1	2V			+MBC1&EFS/1.3
				1W	'	-X1	2W			+MBC1&EFS/1.3
		+UPS1-E1-X1	U	2U	'	-X1	1U			+MBC1&EFS/1.3
		+UPS1-E1-X1	V	2V	'	-X1	1V			+MBC1&EFS/1.3
		+UPS1-E1-X1	W	2W	'	-X1	1W			+MBC1&EFS/1.3
				3U	'	-X1	4U			+MBC1&EFS/1.6
				3V	'	-X1	4V			+MBC1&EFS/1.6
				3W	'	-X1	4W			+MBC1&EFS/1.6
				4U	'	-X1	3U			+MBC1&EFS/1.6
				4V	'	-X1	3V			+MBC1&EFS/1.6
				4W	'	-X1	3W			+MBC1&EFS/1.6

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				Editor	Beckschäfer		
01	500000002053	13.08.2024	Beckschäfer	Checked	Ch.Peck		
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Terminal diagram =+MBC1-X1
Bypass transformer cabinet
with manual bypass 20 kVA
Terminal diagram

1000007888_080 en

=
+ MBC1
& EMA

A3

sheet 2
sheets 22

CAE EPLAN Electric P8

Terminal diagram

terminal
=+MBC1-X2

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+UPS1-E2-X2	L+	1L+	'	-X2	2L+			+MBC1&EFS/2.2
		+UPS1-E2-X2	L-	1L-	'	-X2	2L-			+MBC1&EFS/2.3
				2L+	'	-X2	1L+			+MBC1&EFS/2.2
				2L-	'	-X2	1L-			+MBC1&EFS/2.3
				3L+	'	-X2	4L+			+MBC1&EFS/3.2
				3L-	'	-X2	4L-			+MBC1&EFS/3.3
				4L+	'	-X2	3L+			+MBC1&EFS/3.2
				4L-	'	-X2	3L-			+MBC1&EFS/3.3

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X2
Bypass transformer cabinet
with manual bypass 20 kVA
Terminal diagram

1000007888_080 en

=
+ MBC1
& EMA

A3

sheet 3
sheets 22

CAE EPLAN Electric P8

Terminal diagram

terminal
=+MBC1-X4

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+UPS1-E4-X4	U	1U	'	-Q28.1	2			+MBC1&EFS/5.3
		+UPS1-E4-X4	V	1V	'	-Q28.1	4			+MBC1&EFS/5.3
		+UPS1-E4-X4	W	1W	'	-Q28.1	6			+MBC1&EFS/5.3
		+UPS1-E4-X4	N	1N	'	-1N				+MBC1&EFS/5.4
				2U	'	-Q28.2	2			+MBC1&EFS/5.6
				2V	'	-Q28.2	4			+MBC1&EFS/5.6
				2W	'	-Q28.2	6			+MBC1&EFS/5.6
				2N	'	-1N				+MBC1&EFS/5.6

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X4
Bypass transformer cabinet
with manual bypass 20 kVA
Terminal diagram

1000007888_080 en

=
+ MBC1
& EMA

A3

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sheets 22

CAE EPLAN Electric P8

Terminal diagram

terminal
=+MBC1-X5

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+UPS1-E3-X3	U	1U	'	-Q71	2			+MBC1&EFS/6.3
		+UPS1-E3-X3	V	1V	'	-Q71	4			+MBC1&EFS/6.3
		+UPS1-E3-X3	W	1W	'	-Q71	6			+MBC1&EFS/6.3
		+UPS1-E3-X3	N	1N	'	-1N				+MBC1&EFS/6.3
				2U	'	-Q72	2			+MBC1&EFS/6.5
				2V	'	-Q72	4			+MBC1&EFS/6.5
				2W	'	-Q72	6			+MBC1&EFS/6.6
				2N	'	-1N				+MBC1&EFS/6.6

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X5
Bypass transformer cabinet
with manual bypass 20 kVA
Terminal diagram

1000007888_080 en

=
+ MBC1
& EMA

A3

sheet 5
sheets 22

CAE EPLAN Electric P8

Terminal diagram

terminal
=+MBC1-X10

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U	'	-Q10	1			+MBC1&EFS/4.4
				V	'	-Q10	3			+MBC1&EFS/4.5
				W	'	-Q10	5			+MBC1&EFS/4.5

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X10
Bypass transformer cabinet
with manual bypass 20 kVA
Terminal diagram

1000007888_080 en

=
+ MBC1
& EMA

A3

sheet 6
sheets 22

CAE EPLAN Electric P8

Terminal diagram

terminal
=+MBC1-X12

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1	'	-Q29	103			+MBC1&EFS/6.7
				2	'	-Q29	104			+MBC1&EFS/6.7
				3	'	-Q29	102			+MBC1&EFS/6.7
				4	'	-F25	11			+MBC1&EFS/9.6
				5	'	-F25	12			+MBC1&EFS/9.6
				6	'	-F25	14			+MBC1&EFS/9.6
				7	'	-K1	12			+MBC1&EFS/10.7
				8	'	-K1	11			+MBC1&EFS/10.7
				9	'	-K1	14			+MBC1&EFS/10.7

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X12
Bypass transformer cabinet
with manual bypass 20 kVA
Terminal diagram

1000007888_080 en

=
+ MBC1
& EMA

A3

sheet 7
sheets 22

CAE EPLAN Electric P8

Terminal diagram

terminal
=+MBC1-X13

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+UPS1-X14	U	U		-F100	1:1			+MBC1&EFS/11.2
		-X14	U	U						+MBC1&EFS/11.2
		+UPS1-X14	N	N		-A85	-X1:2			+MBC1&EFS/11.3
		-X14	N	N						+MBC1&EFS/11.3
				PE						+MBC1&EFS/11.3
				PE						+MBC1&EFS/11.3

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X13
Bypass transformer cabinet
with manual bypass 20 kVA
Terminal diagram

1000007888_080 en

=
+ MBC1
& EMA

A3

sheet 8
sheets 22

Terminal diagram

terminal

=+MBC1-X14

Cable name / Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name / Cable type	Position / Page
	-X13	U	U	┐	-F110	1:2		+MBC1&EFS/11.6
	+UPS2-X13	U	U	┘				+MBC1&EFS/11.6
	-X13	N	N	┐	-X114	N		+MBC1&EFS/11.7
	+UPS2-X13	N	N	┘				+MBC1&EFS/11.7

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CAE EPLAN Electric P8

Terminal diagram

terminal
=+MBC1-X15

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+UPS1-X15	2	2	'	-X15	4			+MBC1&EFS/2.4
		+UPS1-X15	3	3	'	-X15	5			+MBC1&EFS/2.4
				4	'	-X15	2			+MBC1&EFS/2.4
				5	'	-X15	3			+MBC1&EFS/2.4
		+UPS2-X15	2	6	'	-X15	8			+MBC1&EFS/3.4
		+UPS2-X15	3	7	'	-X15	9			+MBC1&EFS/3.4
				8	'	-X15	6			+MBC1&EFS/3.4
				9	'	-X15	7			+MBC1&EFS/3.4

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X15
Bypass transformer cabinet
with manual bypass 20 kVA
Terminal diagram

1000007888_080 en

=
+ MBC1
& EMA

A3

sheet 10
sheets 22

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Terminal diagram

terminal

=+MBC1-X31

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U	'	-QF31	2			+MBC1&EFS/7.2
				N	'	-QF31	N			+MBC1&EFS/7.2
				PE	'	-PE				+MBC1&EFS/7.2

				Date	13.08.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Terminal diagram =+MBC1-X31 Bypass transformer cabinet with manual bypass 20 kVA Terminal diagram	=
				Editor	Beckschäfer				+ MBC1
01	500000002053	13.08.2024	Beckschäfer	Checked	Ch.Peck			1000007888_080 en	& EMA
Stat	Alteration	Date	Name	Norm					A3 sheet 11 / sheets 22

CAE EPLAN Electric P8

Terminal diagram

terminal
=+MBC1-X32

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				V	'	-QF32	2			+MBC1&EFS/7.3
				N	'	-QF32	N			+MBC1&EFS/7.3
				PE	'					+MBC1&EFS/7.3

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Terminal diagram

terminal
=+MBC1-X33

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				W	'	-QF33	2			+MBC1&EFS/7.5
				N	'	-QF33	N			+MBC1&EFS/7.5
				PE	'					+MBC1&EFS/7.5

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X33
Bypass transformer cabinet
with manual bypass 20 kVA
Terminal diagram

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=
+ MBC1
& EMA

A3

sheet 13
sheets 22

CAE EPLAN Electric P8

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Terminal diagram

terminal
=+MBC1-X34

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U	'	-QF34	2			+MBC1&EFS/7.6
				N	'	-QF34	N			+MBC1&EFS/7.6
				PE	'					+MBC1&EFS/7.7

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Stat	Alteration	Date	Name	Norm			

Terminal diagram =+MBC1-X34
Bypass transformer cabinet
with manual bypass 20 kVA
Terminal diagram

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=
+ MBC1
& EMA

A3

sheet 14
sheets 22

CAE EPLAN Electric P8

Terminal diagram

terminal
=+MBC1-X35

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				V	'	-QF35	2			+MBC1&EFS/7.8
				N	'	-QF35	N			+MBC1&EFS/7.8
				PE	'					+MBC1&EFS/7.8

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X35
Bypass transformer cabinet
with manual bypass 20 kVA
Terminal diagram

1000007888_080 en

=
+ MBC1
& EMA

A3

sheet 15
sheets 22

CAE EPLAN Electric P8

Terminal diagram

terminal
=+MBC1-X36

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				W	'	-QF36	2			+MBC1&EFS/8.2
				N	'	-QF36	4			+MBC1&EFS/8.2
				PE	'	-PE				+MBC1&EFS/8.2

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X36
Bypass transformer cabinet
with manual bypass 20 kVA
Terminal diagram

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=
+ MBC1
& EMA

A3

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sheets 22

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Terminal diagram

terminal

=+MBC1-X37

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U	'	-QF37	2			+MBC1&EFS/8.3
				N	'	-QF37	4			+MBC1&EFS/8.3
				PE	'					+MBC1&EFS/8.4

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Terminal diagram =+MBC1-X37
Bypass transformer cabinet
with manual bypass 20 kVA
Terminal diagram

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=
+ MBC1
& EMA

A3

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sheets 22

CAE EPLAN Electric P8

Terminal diagram

terminal

=+MBC1-X38

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				V	'	-QF38	2			+MBC1&EFS/8.4
				N	'	-QF38	4			+MBC1&EFS/8.5
				PE	'					+MBC1&EFS/8.5

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Terminal diagram =+MBC1-X38
Bypass transformer cabinet
with manual bypass 20 kVA
Terminal diagram

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=
+ MBC1
& EMA

A3

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sheets 22

CAE EPLAN Electric P8

Terminal diagram

terminal
=+MBC1-X91

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+UPS1-F91	1	1M	'	-X91	2M			+MBC1&EFS/2.5
				2M	'	-X91	1M			+MBC1&EFS/2.5
		+UPS2-F91	1	3M	'	-X91	4M			+MBC1&EFS/3.5
				4M	'	-X91	3M			+MBC1&EFS/3.5

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X91
Bypass transformer cabinet
with manual bypass 20 kVA
Terminal diagram

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=
+ MBC1
& EMA

A3

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sheets 22

CAE EPLAN Electric P8

Terminal diagram

terminal
=+MBC1-X92

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+UPS1-F92	1	1M	'	-X92	2M			+MBC1&EFS/2.5
				2M	'	-X92	1M			+MBC1&EFS/2.5
		+UPS2-F92	1	3M	'	-X92	4M			+MBC1&EFS/3.5
				4M	'	-X92	3M			+MBC1&EFS/3.5

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X92
Bypass transformer cabinet
with manual bypass 20 kVA
Terminal diagram

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=
+ MBC1
& EMA

A3

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sheets 22

CAE EPLAN Electric P8

Terminal diagram

terminal
=+MBC1-X93

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+UPS1-F93	1	1M	'	-X93	2M			+MBC1&EFS/2.6
				2M	'	-X93	1M			+MBC1&EFS/2.6
		+UPS2-F93	1	3M	'	-X93	4M			+MBC1&EFS/3.6
				4M	'	-X93	3M			+MBC1&EFS/3.6

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Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+MBC1-X93
Bypass transformer cabinet
with manual bypass 20 kVA
Terminal diagram

1000007888_080 en

=
+ MBC1
& EMA

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sheets 22

CAE EPLAN Electric P8

Terminal diagram

terminal
=+MBC1-X130

Cable name			Cable name	-W208	-W209	-W100
Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable type	LiYCY 3x0,5 mm²	LiYCY 3x0,5 mm²	H05VV 2x1 mm²
										Position / Page
	+BAT1-R81-X1	1	1	'	+UPS1-X130	1		WH		+MBC1&EFS/2.7
	+BAT2-R81-X1	1	3	'	+UPS2-X130	1			WH	+MBC1&EFS/3.7
	+BAT1-R81-X1	2	2	'	+UPS1-X130	2		BN		+MBC1&EFS/2.7
	+BAT2-R81-X1	2	4	'	+UPS2-X130	2			BN	+MBC1&EFS/3.7
			1PE	'						+MBC1&EFS/2.7
			2PE	'						+MBC1&EFS/3.7

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				Date	13.08.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Terminal diagram =+MBC1-X130 Bypass transformer cabinet with manual bypass 20 kVA Terminal diagram
				Editor	Beckschäfer			
01	500000002053	13.08.2024	Beckschäfer	Checked	Ch.Peck			
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1000007888_080 en

= | + MBC1 | & EMA | A3 | sheet 22 | sheets 22

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Three-phase input
Attention! Observe sequence of wires, L1, L2, L3 -->
See technical data sheet for required mains fuses

Power section rectifier

mains transformer

Note: Reinforced insulated wire
0,75 mm² unmarked wires

-L61 N=2

Measurement REC Interface -A9-A50-X2
Supply REC Interface -A9-A50-X3

01L1 / 12.6
01L2 / 12.6
01L3 / 12.6
02L1 / 11.1
02L2 / 11.1
02L3 / 11.1

-L22
-T40
-L85.1
-L85.2

1L1 / 2.1
1L2 / 2.1
1L3 / 2.1
2L1 / 3.1
2L2 / 3.1
2L3 / 3.1

-C101.1
-C101.2
-C101.3
-Q3
-Q1
L=100/85A
I=1,0kA
Icu=50kA
/12.4
/12.3
-L23 -L24 -L25
-R23 -R24 -R25
-C23 -C24 -C25
3xR6 mm²

-A80
-A81
Suppression
-R86 -R87 -R88
-R81 -R82 -R83
-V81.1-V81.6
-R84.1 -R84.2
-C84
-C85

-E1
-X1 -A2
EMI capacitor 4-pole 8000022634 STR
-C4 -C5 -C1 -C6 -C2 -C7 -C3 -C8 -C9 -C10
-X1 -X2 -X3
-L92
-A1
Mains
400V;3/PE~50HZ

Rack
-PE
PE busbar
Cu 40x5 mm
GNYE 6 mm²
Tür links
Pivot plate

+MBC1
Bypass transformer cabinet
with manual bypass 20 kVA
1000007888.090
10009760

GZ1_1 +MBC1/1.3
GZ1_2 +MBC1/1.3
GZ1_3 +MBC1/1.3

1000007888_080

				Date	14.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Rectifier input Protect 8.33 20-400-204-400 Circuit diagram	1000007888.080 10009759
				Editor	EEC				
				Checked	Ch.Peck				
Stat	Alteration	Date	Name	Norm					

1000007888_080 en

= + UPS1 & EFS

A3 sheet 1 sheets 23

Power section rectifier

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-A1
/3.1

4.1 / 2L+ -L+:X2:1 → 1L+ / 3.2

1.8 / 1L1 -L1:X1:1
1.8 / 1L2 -L2:X1:2
1.8 / 1L3 -L3:X1:3

-C85.1 -C85.2 -C85.3

-T80 -T81

-V1 -V2 -V3

-A82 REC suppression 6765463 STR
-K
-AK1
-AK2
-AK3
-A

4.1 / 2L- -L-:X2:2 → 1L- / 3.2

RD

-A80 REC trigger circuit 8000023368 STR
-X6:1
2

-X7 -X8 -X3 -X4 -X5

GR-Strom 15 | GND 16 | V2 4 | V1 2 | V4 8 | V3 6 | V6 12 | V5 10 | GND 1 | GND 3 | +24V 13 | +24V 14 | V12 20 | V11 18 | V14 24 | V13 22 | V16 28 | V15 26 | GND 17 | GND 19 | +24V 29 | +24V 30

V12 4
V11 2
V14 8
V13 6
V16 12
V15 10
GND 1
GND 3
+24V 13
+24V 14

-X2 1-40 → 0FB2 / 3.1 REC triggering -A1-A81-X1

-X9 1 2
-R100

-X1 1-40

-0FB1
40x

REC interface -A9-A50-X1 → 0FB1 / 12.4

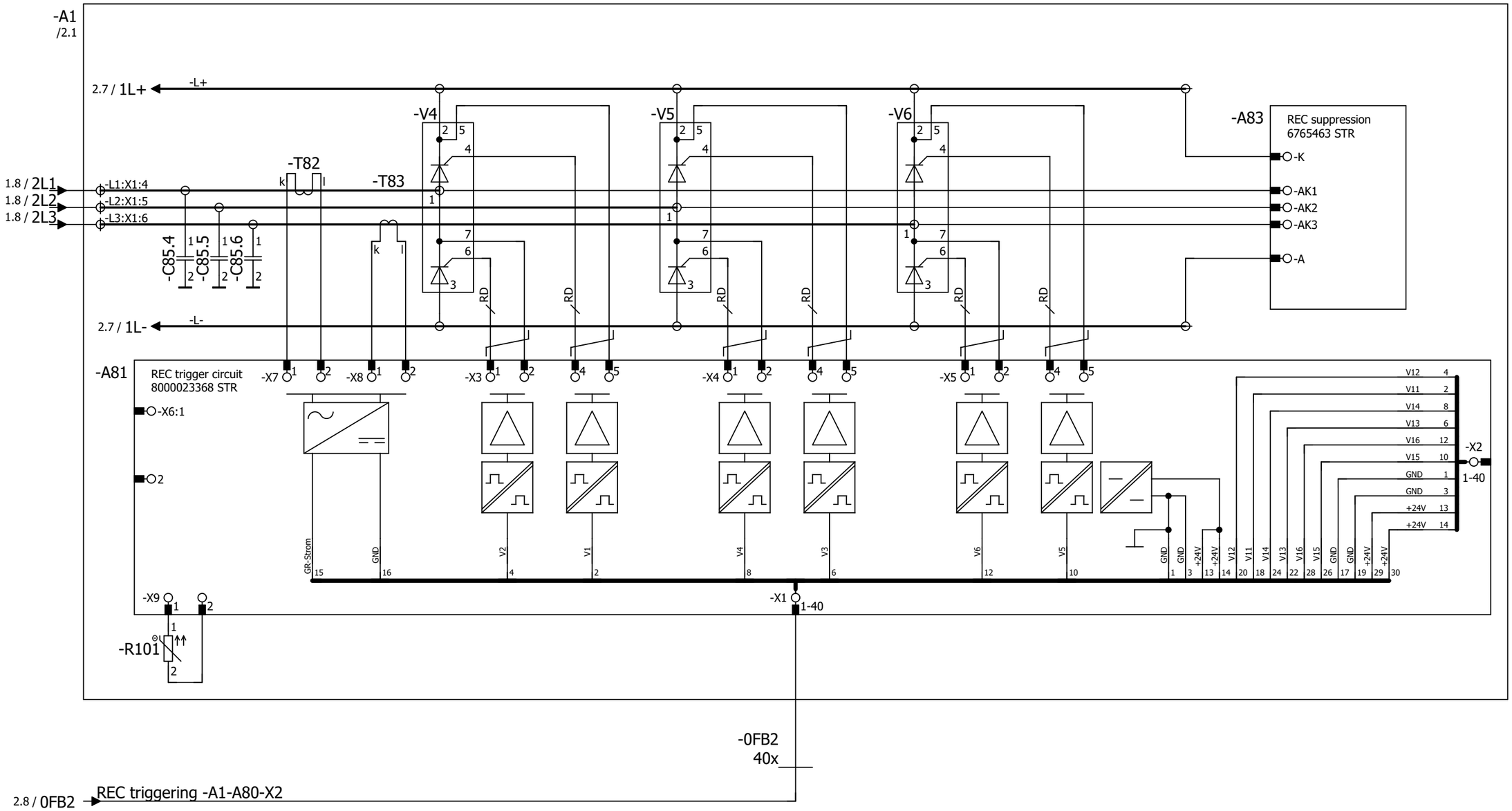
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				Editor	EEC						+ UPS1
				Checked	Ch.Peck				1000007888.080 10009759	1000007888_080 en	& EFS
Stat	Alteration	Date	Name	Norm							A3 sheet 2 / sheets 23

Power section rectifier

CAE EPLAN Electric P8

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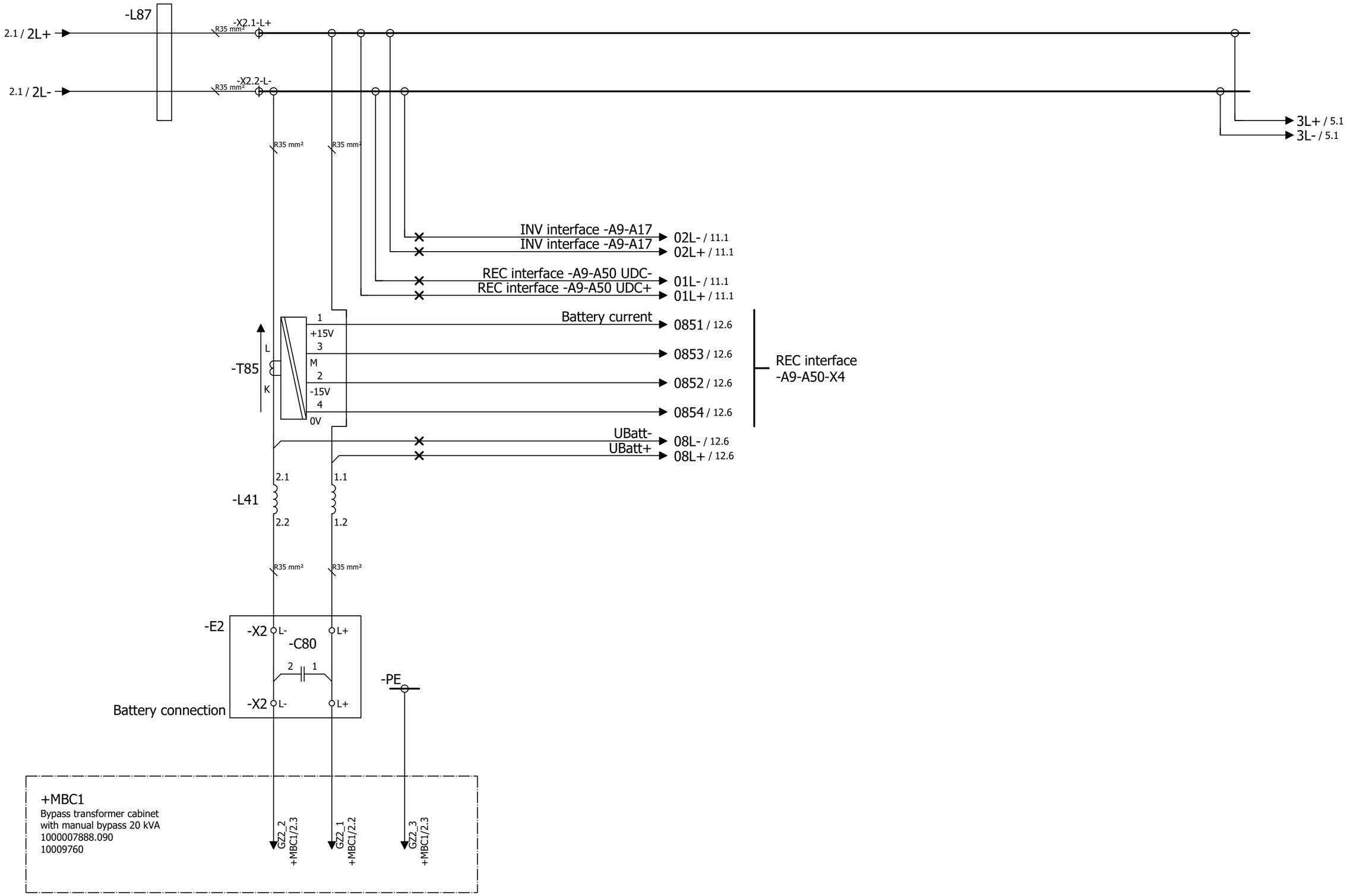
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				Date	14.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Power section rectifier Protect 8.33 20-400-204-400 Circuit diagram	=
				Editor	EEC				+ UPS1
				Checked	Ch.Peck			1000007888.080 10009759	1000007888_080 en & EFS
Stat	Alteration	Date	Name	Norm					A3 sheet 3 / sheets 23

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Power section rectifier
Battery connection



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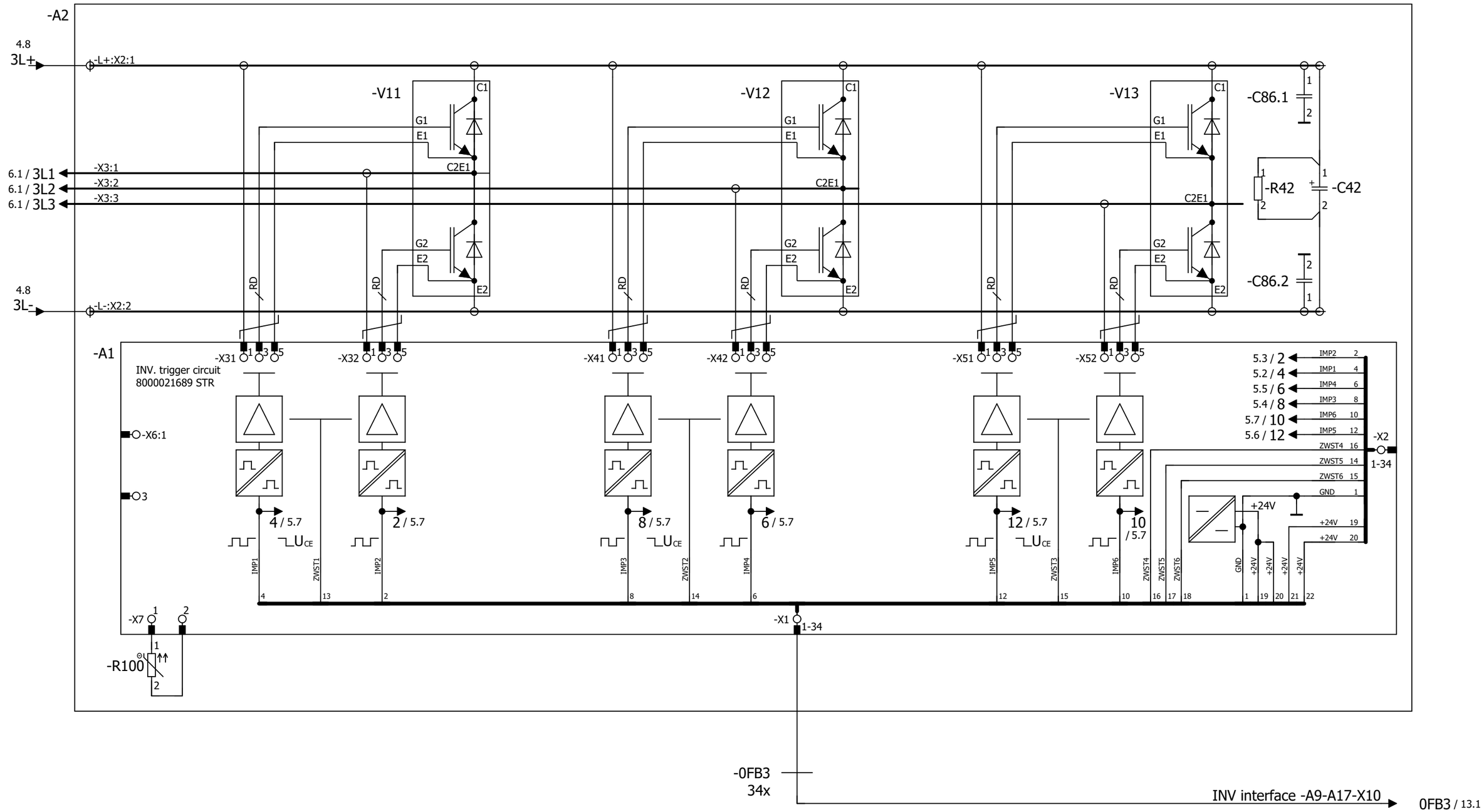
				Date	14.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Battery connection Protect 8.33 20-400-204-400	=
				Editor	EEC				+ UPS1
				Checked	Ch.Peck			1000007888.080	& EFS
Stat	Alteration	Date	Name	Norm				Circuit diagram	10009759

1000007888_080 en | A3 | sheet 4 | sheets 23

Power section inverter

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				Editor	EEC				
				Checked	Ch.Peck				
Stat	Alteration	Date	Name	Norm					

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= + UPS1 & EFS

A3

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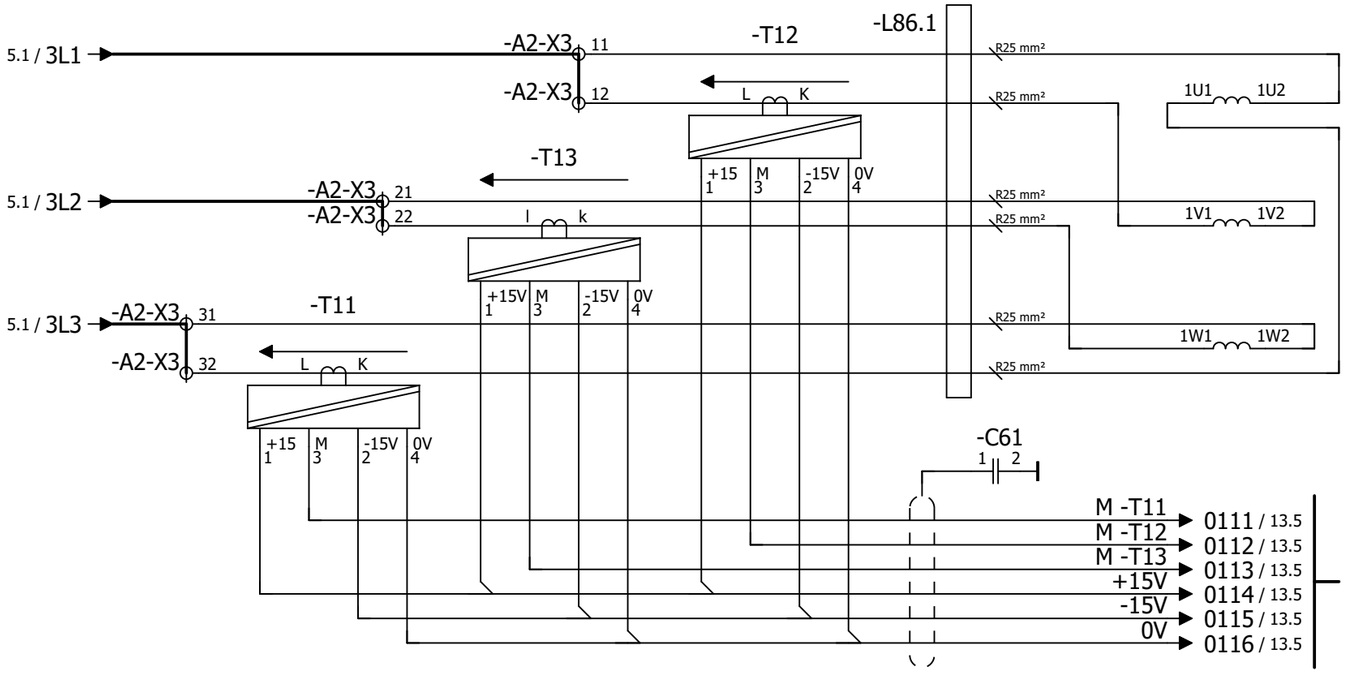
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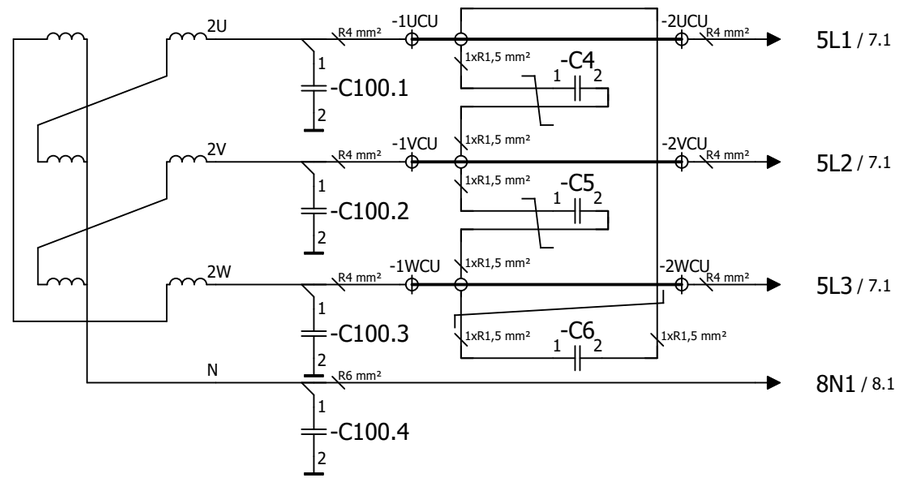
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Power section inverter

Measuring INV current dynamic



-T1



				Date	14.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Inverter output Protect 8.33 20-400-204-400		=	
				Editor	EEC					+ UPS1	
				Checked	Ch.Peck				1000007888.080	& EFS	A3 sheet 6
Stat	Alteration	Date	Name	Norm				Circuit diagram	10009759	1000007888_080 en	sheets 23

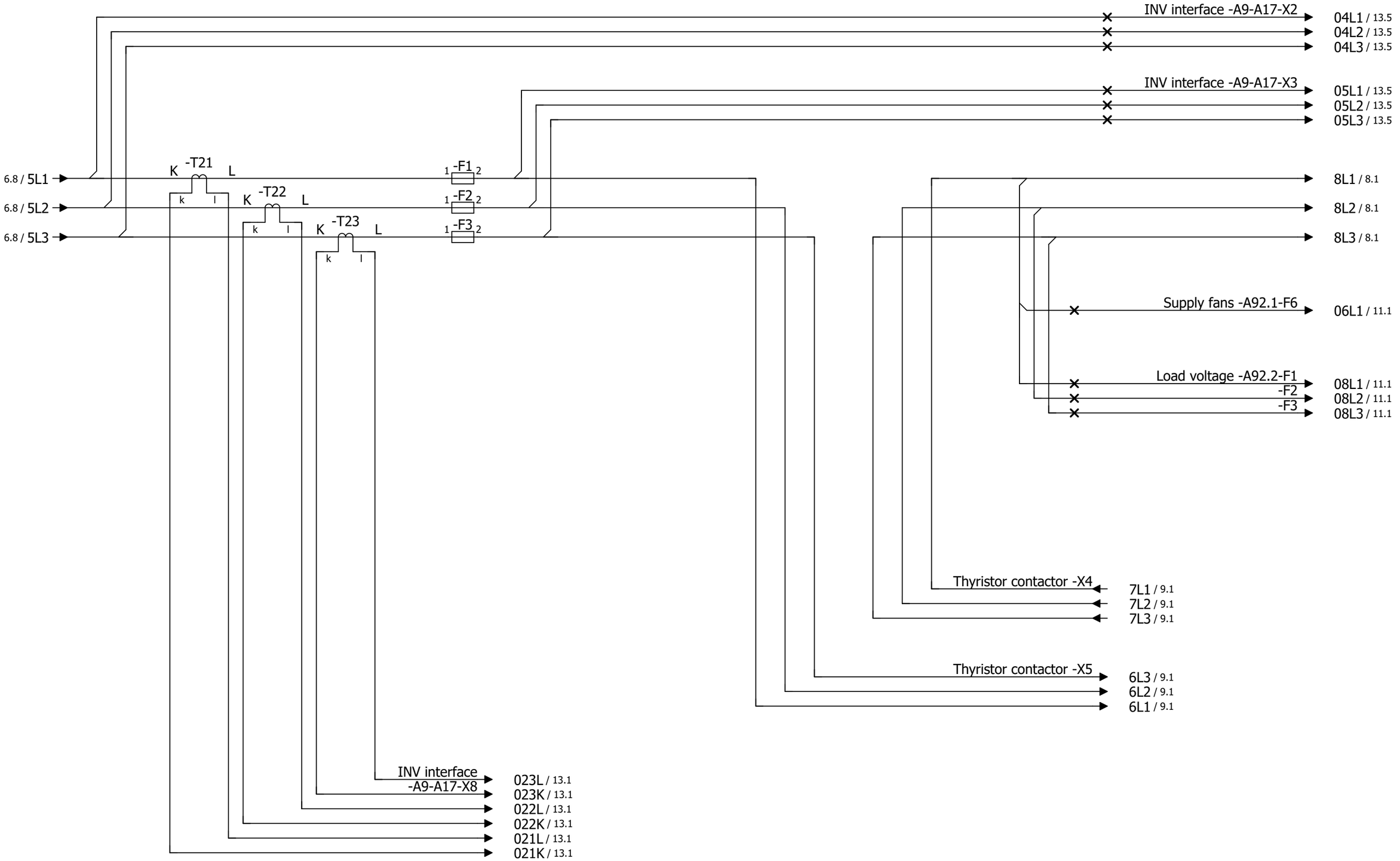
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Power section inverter

Measurement INV current static

Output fuse



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				Editor	EEC				+ UPS1
				Checked	Ch.Peck			1000007888.080 10009759	1000007888_080 en
Stat	Alteration	Date	Name	Norm					& EFS

A3 | sheet 7 | sheets 23

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Power section inverter

Parallel preventive choke coil

7.8 / 8L1
7.8 / 8L2
7.8 / 8L3
6.8 / 8N1

-L11 -L12 -L13

R4 mm² R25 mm² 2xR35 mm²

SBS Output
10L1 / 10.1
10L2 / 10.1
10L3 / 10.1

-A105
-C56 -C57 -C58
-X1 -X2 -X3 -X4

SBS Input
9L1 / 10.1
9L2 / 10.1
9L3 / 10.1

fan neutral conductor
0451N1 / 17.1

neutral conductor
04N1 / 13.5
-A9

-E3
-X3 U V W N
-A4
-X4
EMI capacitor 4-pole 8000022634 STR
-C4 -C5 -C1 -C6 -C2 -C7 -C3 -C8 -C9 -C10
-X1 -X2 -X3

-L93

-A3
-X4
EMI capacitor 4-pole 8000022634 STR
-C4 -C5 -C1 -C6 -C2 -C7 -C3 -C8 -C9 -C10
-X1 -X2 -X3

Load
400V;3/N/PE~50Hz
-X3 U V W N

-PE

-E4
-X4 U V W N
-A4
-X4
EMI capacitor 4-pole 8000022634 STR
-C4 -C5 -C1 -C6 -C2 -C7 -C3 -C8 -C9 -C10
-X1 -X2 -X3

-L94

-A3
-X4
EMI capacitor 4-pole 8000022634 STR
-C4 -C5 -C1 -C6 -C2 -C7 -C3 -C8 -C9 -C10
-X1 -X2 -X3

Mains
400V;3/N/PE~50Hz
-X4 U V W N

+MBC1
Bypass transformer cabinet
with manual bypass 20 kVA
1000007888.090
10009760

GZ3_1 +MBC1/6.3
GZ3_2 +MBC1/6.3
GZ3_3 +MBC1/6.3
GZ3_4 +MBC1/6.3

GZ4_1 +MBC1/5.3
GZ4_2 +MBC1/5.3
GZ4_3 +MBC1/5.3
GZ4_4 +MBC1/5.4

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				Date	14.05.2024		=
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						1000007888.080 10009759	1000007888_080 en
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Power section inverter
Inverter output contactor

-A4

-A37 SBS suppression 8000028996 STR

-A3 -K3 -AK3 -A2 -K2 -AK2 -A1 -K1 -AK1

-V31

-X4:1AC
-X4:1
-X4:1K

A K AK G2 K2 K1 G1

-V33

-X4:2AC
-X4:2
-X4:2K

-V35

-X4:3AC
-X4:3
-X4:3K

RD

-A36 SBS trigger circuit 8000028563 STR

-X2 -X3 -X4 -X5:1 -X5:2

GND EUE_EIN GND GND +24V +24V 1 2 3 4 5 6 7 8 9 10

-X6 1 2

-R100

-X1 1-10

-0FB10
10x

-X6 5 -X6 6 -X6 3 -X6 4 -X6 1 -X6 2

7.7 / 7L1
7.7 / 7L2
7.7 / 7L3

7.7 / 6L3
7.7 / 6L2
7.7 / 6L1

INV interface -A9-A17-X1 → 0FB10 / 13.1

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Power section SBS

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-A3

-A37 SBS suppression 8000028996 STR

-A3 -K3 -AK3 -A2 -K2 -AK2 -A1 -K1 -AK1

SBS mains voltage -A92.2-F6 → 010L1 / 11.1
-A92.2-F7 → 010L2 / 11.1
-A92.2-F8 → 010L3 / 11.1

8.8 / 9L1 SBS mains
8.8 / 9L2 SBS mains
8.8 / 9L3 SBS mains

-V31 -V33 -V35

-X4:1A -X4:1 -X4:1K
-X4:2A -X4:2 -X4:2K
-X4:3A -X4:3 -X4:3K

A K AK G2 K2 K1 G1 RD

-X2 -X3 -X4

-A36 SBS trigger circuit 8000028563 STR

-X5:1
2

GND EUE_EIN GND GND +24V +24V
1 2 3 4 5 6 7 8 9 10

-X6 1 2
-X1 1-10

-R100

SBS interface -A9-A16-X1 → 0FB9 / 14.3

-X6 5
-X6 6
-X6 3
-X6 4
-X6 1
-X6 2

8.8 / 10L3 UPS Output
8.8 / 10L2
8.8 / 10L1

-X5:3
-X5:2
-X5:1

SBS interface -A9-A16-X4 → 03151L / 14.3
-A9-A16-X4 → 03151K / 14.3
-A9-A16-X4 → 03352L / 14.3
-A9-A16-X4 → 03352K / 14.3
-A9-A16-X4 → 03553L / 14.3
-A9-A16-X4 → 03553K / 14.3

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Power section SBS
Protect 8.33 20-400-204-400
Circuit diagram

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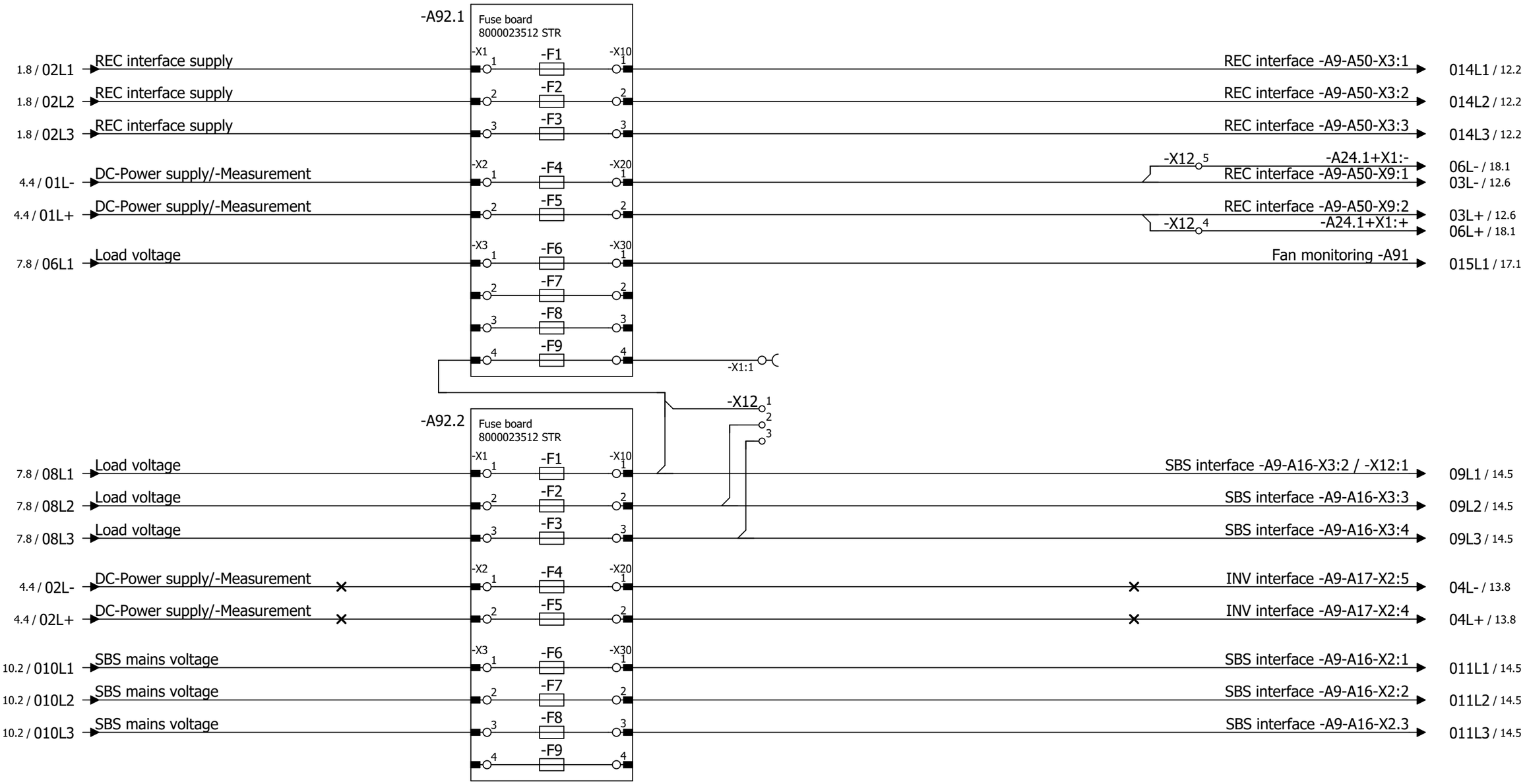
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Fuse boards

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Rectifier control

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-A9
/16.1

4.4 / 0854
4.4 / 0851
4.4 / 0853
4.4 / 0852
Battery current transformer -T85

4.4 / 08L+
4.4 / 08L-
UBatt+
UBatt-

11.8 / 03L+
11.8 / 03L-
UIC+ A92.1-F5
UIC- A92.1-F4

1.8 / 01L3
1.8 / 01L2
1.8 / 01L1
-Q1 REC input voltage

11.8 / 014L3
11.8 / 014L2
11.8 / 014L1
-T40 sec. supply REC

2.8 / 0FB1
REC trigger circuit -A1-A80-X1

-A50
/16.2
REC interface
8000022025 STR

-X3 1 2 3
-X5 7 8
-X1 1-40
-X2 1 3 5
-X9 1 2 3 4
-X4 2 3 1 4
-15V +15V

GND V1 GND V2 V3 V4 V5 V6 +24V +24V GND V11 GND V12 V13 V14 V15 V16 +24V +24V REC current
+24V
+24V

-R204
-R206
REC current stack A1
REC current stack A2

-X11 1-50
-A50X11__50x
-X12 1-50
-A50X12__50x

-A1
REC control
8000014119 STR

-X19 1 2 3
-X15 1 4
-X8 1 2 3
-X5 3 4 +24V DC
-X8 5 6
-X8 4 5 6
-X5 5 6

-X130 1 2
-X12 10 11 15
-Q3
/1.4
96 98
95
-Q1 C1 C2

BK R1,5 mm²
-C711 220000µF
-C712 220000µF
BK R2,5 mm²
BK R2,5 mm²
BK R1,5 mm²
BK R1,5 mm²
0V
-X15 1 1
-X15 2 2 (+) 3 (-)
*1

+MBC1
Bypass transformer cabinet
with manual bypass 20 kVA
1000007888.090
10009760

GZ130_1 +MBC1/2.7
GZ130_2 +MBC1/2.7

+MBC1
Bypass transformer cabinet
with manual bypass 20 kVA
1000007888.090
10009760

GZ15_2 +MBC1/2.4
GZ15_3 +MBC1/2.4

*1 Attention! In the event of battery undervoltage < 130 V, the UPS automatically switches off battery isolator Q2.
If this happens, switch X15:3 must be switched into the open position (undervoltage trip blocked).
For restart, please refer to the chapter in the UPS operating instructions (charging the DC link capacitors).
Unlock the tripped switch Q2 by switching to open position.
After charging the DC link capacitors, switch on Q2.
Attention! When the battery voltage reaches > 200 V, switch X15:3 must be switched back to the closed position.

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Rectifier control
Protect 8.33 20-400-204-400

Circuit diagram

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A3

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Inverter control

INV current static

7.3 / 023L Transformer -T23
7.3 / 023K
7.3 / 022L Transformer -T22
7.3 / 022K
7.3 / 021L Transformer -T21
7.3 / 021K

INV. trigger circuit
-A2-A1-X1
5.8 / 0FB3

Trigger circuit
-A4-A36-X1
9.7 / 0FB10

INV current dynamic

7.8 / 05L1 INV output voltage reference
7.8 / 05L2
7.8 / 05L3
8.8 / 04N1 neutral conductor → N → 05N1 / 14.5
7.8 / 04L1 INV output voltage
7.8 / 04L2
7.8 / 04L3

6.5 / 0116 Transformer -T11...-T13
6.5 / 0115
6.5 / 0113
6.5 / 0112
6.5 / 0111
6.5 / 0114

11.8 / 04L+ UIC+
11.8 / 04L- UIC-

-A9
/16.1

-A17
/16.3
INV interface
8000022441 STR

-X1 1-10: GND, SBS_ON, GND, GND, +24V, +24V → +24V
-X10 1-34: IMP1, IMP2, IMP5, IMP6, ZWST1, ZWST3, +24V, +24V, GND → +24V
-X4 1-6, -X8 6
-X13 1-4: -15V, +15V
-X20 1-6: +15V, -15V
-X19 1-6: +15V, -15V
-X2 1W, 2V, 3U, -X3 1N, 2U, 3V, 4W
-X2 5, 4

-R203 -R205 -R207
-R204 -R206 -R208
INV current static

-S201
-S202
-S203
INV current dynamic

-X11 1-50: 48, 14, 13, 12, 17, 21, 23, 49
-X12 1-50: 27, 28, 21, 22, 19, 20, 23, 48, 46, 50, 47, 45, 49, 32, 29, 30, 31, 39, 38, 37, 1, 2

-A17X11 50x
-A17X12 50x

-A1
INV control
8000042636 STR

-X11 1-50: 48, 14, 13, 12, 17, 21, 23, 49
-X12 1-50: 27, 28, 21, 22, 19, 20, 23, 48, 46, 50, 47, 45, 49, 32, 29, 30, 31, 39, 38, 37, 1, 2

-X15 1, 4
-X5 1, 2 (+)
-X5 5, 6 (+)
-X8 8, 7
-X5 3, 4 (+)
-X8 1, 2

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Control SBS

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-A9
/16.1

Transformer -T35
10.4 / 03553L
10.4 / 03553K
Transformer -T33
10.4 / 03352L
10.4 / 03352K
Transformer -T31
10.4 / 03151L
10.4 / 03151K

Load voltage
11.8 / 09L1
11.8 / 09L2
11.8 / 09L3

neutral conductor
13.8 / 05N1
-X1:3
-X12 6

SBS mains voltage
11.8 / 011L1
11.8 / 011L2
11.8 / 011L3

SBS trigger circuit
-A3-A36-X1
10.2 / 0FB9

-L62

-A16
/16.4
SBS interface
8000022378 STR

-X1 1-10
1 GND
2 SBS_ON
3 GND
4 GND
5 +24V
6 +24V
7 8 9 10
+24V

-X4 1 2 3 4 5 6

SBS current

-X2 1U 2V 3W
-X3 1N 2U 3V 4W

-X12
12
-X8
7
7
8
5
4
9
6
-X18
1
2
-R120
1
2

-R201 -R203 -R205
-R202 -R204 -R206

15 16 26 17 21 29 30 27 45 46 35 36 33 41 42 39

-X11 1-50
-A16X11 50x
-X12 1-50
-A16X12 50x

-A1
SBS control
8000008845 STR
-X11 1-50
-X12 1-50
15 16 26 17 21 29 30 27 45 46 35 36 33 41 42 39

-X15 1 2 3 +24V 4 5

Fan control -A92.1-X6
091.11 / 17.7
091.12 / 17.7
091.13 / 17.7
091.14 / 17.7
091.15 / 17.7

1000007888_080

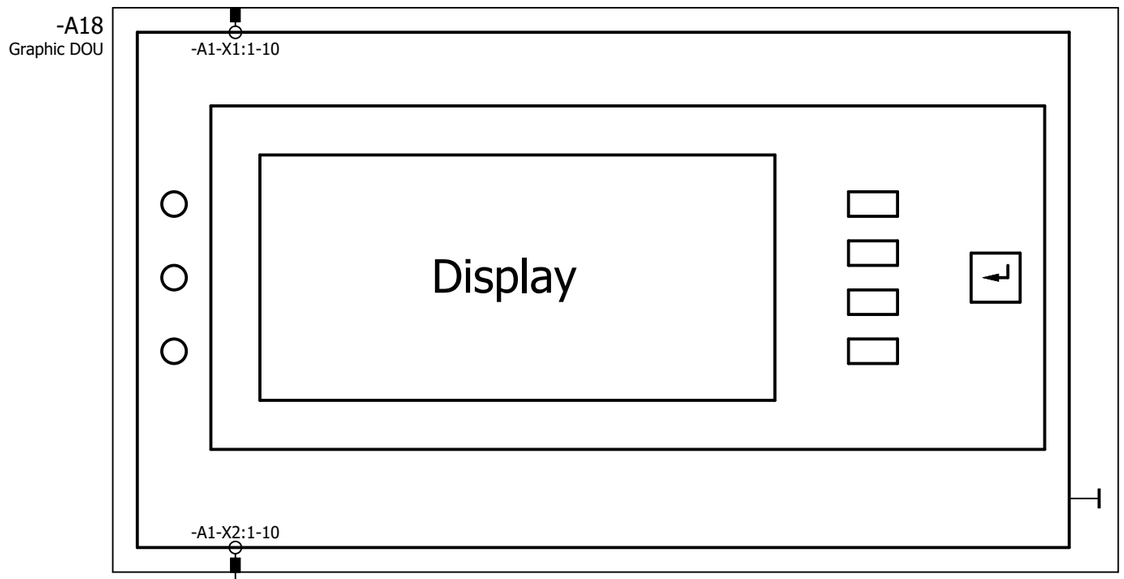
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Stat	Alteration	Date	Name	Norm				

			=		
			+ UPS1		
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Control

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DOU-CAN

A / 16.1

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Control

+UPS2
Protect 8.33 20-400-204-400
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10009759

GZ20_3
+UPS2/16.6

GZ20_5
+UPS2/16.7

INV
-CAN

INV
-sync

-A9
/12.1
/13.1
/14.2
/20.1
/21.1
/22.1

-A50
/12.1
REC interface
8000022025 STR

-X6 1-10
-X7 1-16

-A17
/13.1
INV interface
8000022441 STR

-X6 1-10
-X7 1-16

-A16
/14.2
SBS interface
8000022378 STR

-X6 1-10
-X7 1-16

-A20
Parallel Adapter
8000023378 STR

-X3 1-3
-X4 1-3
-X5 1-4
-X6 1-2

-X1 1-16
-X2 1-16
-X11 1-10
-X12 1-10
-X13 1-10
-X14 1-10

Parallel CAN INV

Parallel CAN REC

15.8 / A

DOU-CAN

A / 20.1

O / 19.1
K / 18.1
L / 18.1

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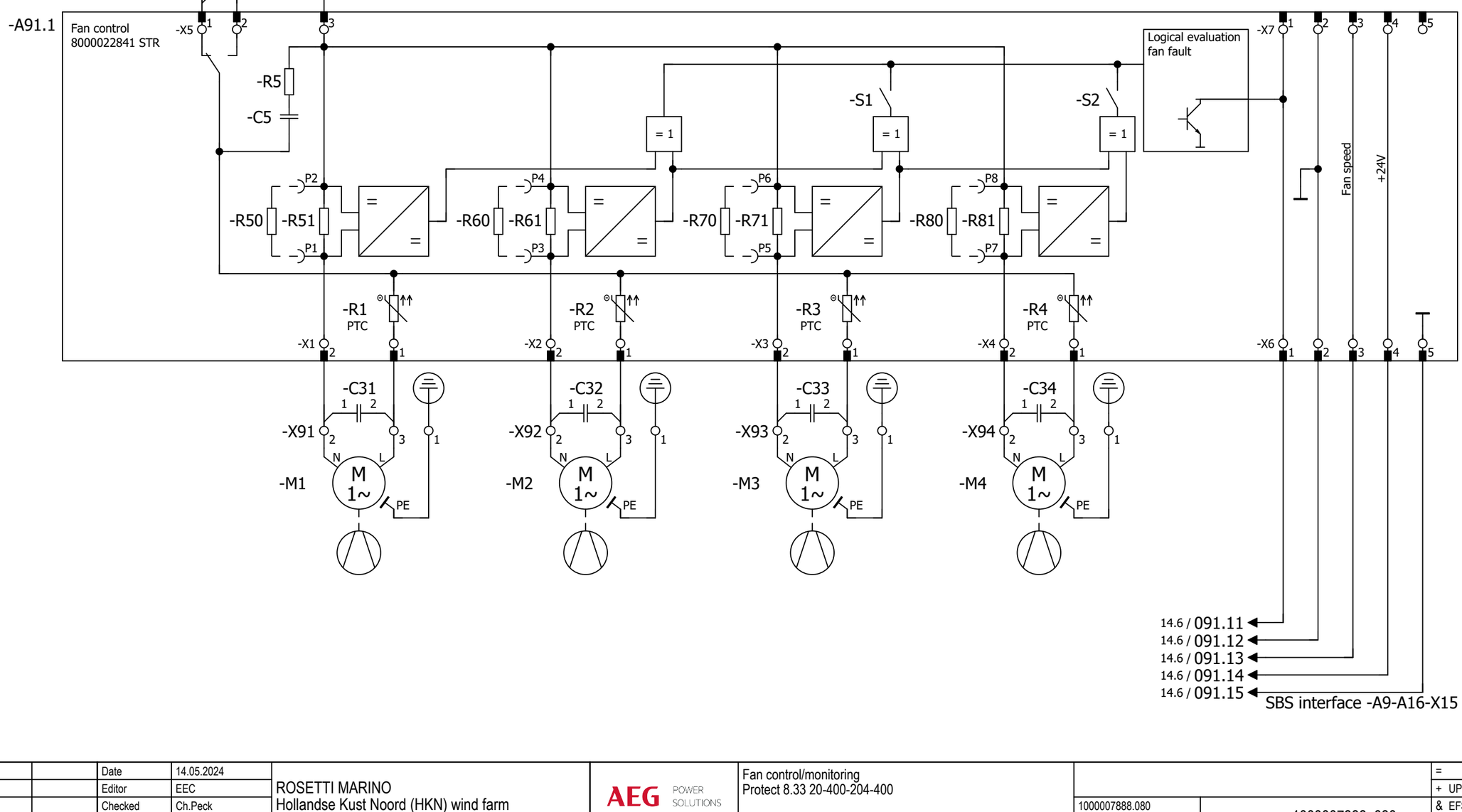
Fan control/monitoring

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11.8 / 015L1

8.8 / 0451N1



14.6 / 091.11
14.6 / 091.12
14.6 / 091.13
14.6 / 091.14
14.6 / 091.15

SBS interface -A9-A16-X15

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+MBC1
Bypass transformer cabinet
with manual bypass 20 kVA
1000007888.090
10009760

GZ91_1
+MBC1/2.5

GZ92_1
+MBC1/2.5

-F91 1
G
F3,15A 2

-F92 1
G
F3,15A 2

11.8 / 06L+

07L+ / 19.1

-A24.1
Battery charge monitoring
BLÜ-PRO
(Option)

-X1 +

M

-

-

-

-

0 ... 5V

-X1 -

-X3 1-16

-X4 1-10

-A24.2
Battery charge monitoring
BLÜ-PRO
(Option)

-X1 +

M

-

-

-

-

0 ... 5V

-X1 -

-X3 1-16

-X4 1-10

16.8 / L

16.8 / K

11.8 / 06L-

07L- / 19.1

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

battery charging circuit monitoring
Protect 8.33 20-400-204-400

Circuit diagram

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+ UPS1
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Control

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+MBC1
Bypass transformer cabinet
with manual bypass 20 kVA
1000007888.090
10009760

GZ93_1
+MBC1/2.6

-F93 1
G
F3,15A 2

18.8 / 07L+

-A24.3
BLÜ-PRO battery charging circuit
monitoring system

-X1 +
M
-
-
-
-
0 ... 5V
-X1 -
-X3 1-16
-X4 1-10

16.8 / O

18.8 / 07L-

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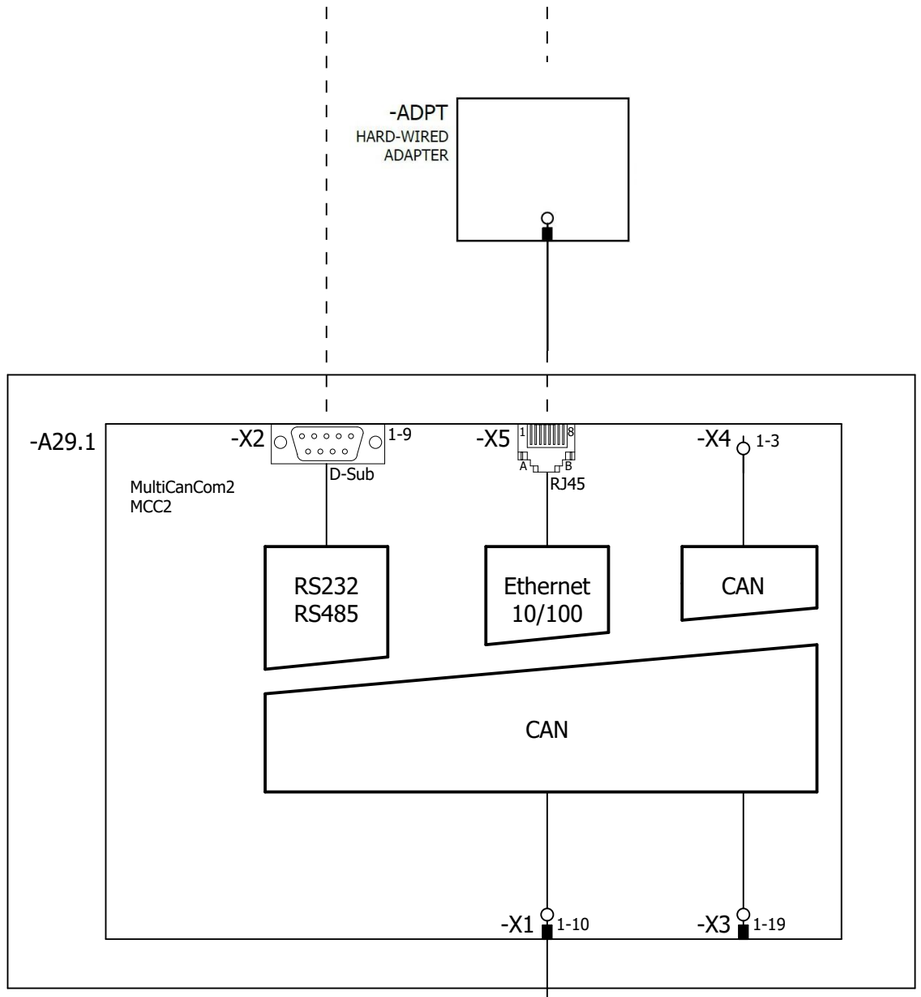
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Control

SNMP adapter
CompuWatch
Service Tools
Modbus

Modbus



16.8 / A → DOU-CAN → A / 21.1

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CAE EPLAN Electric P8

Remote signaling

CAN Service

Configuration remote signals
see techn. data sheet

INV remote off

Common fault

Inverter operation

SBS operation

REC fault

REC mains fault

Battery low

-A9
/16.1

-A12
Remote signaling
8000062777 STR

-X6 1-10

-X5 1 2

-X4 1 2 3

-X3 1 2 3 4 5 6 7 8 9 10 11 12

-K25 -K21 -K22 -K23 -K24

-X1 1-10

-X2 1-16

20.8 / A

B / 22.1

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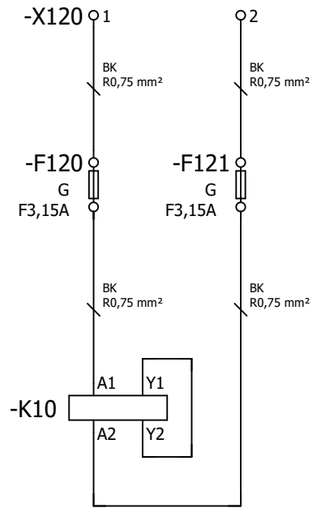
				Date	14.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Remote signaling Protect 8.33 20-400-204-400 Circuit diagram		=
				Editor	EEC					+ UPS1
				Checked	Ch.Peck					& EFS
Stat	Alteration	Date	Name	Norm				1000007888.080 10009759	1000007888_080 en	A3 sheet 21 sheets 23

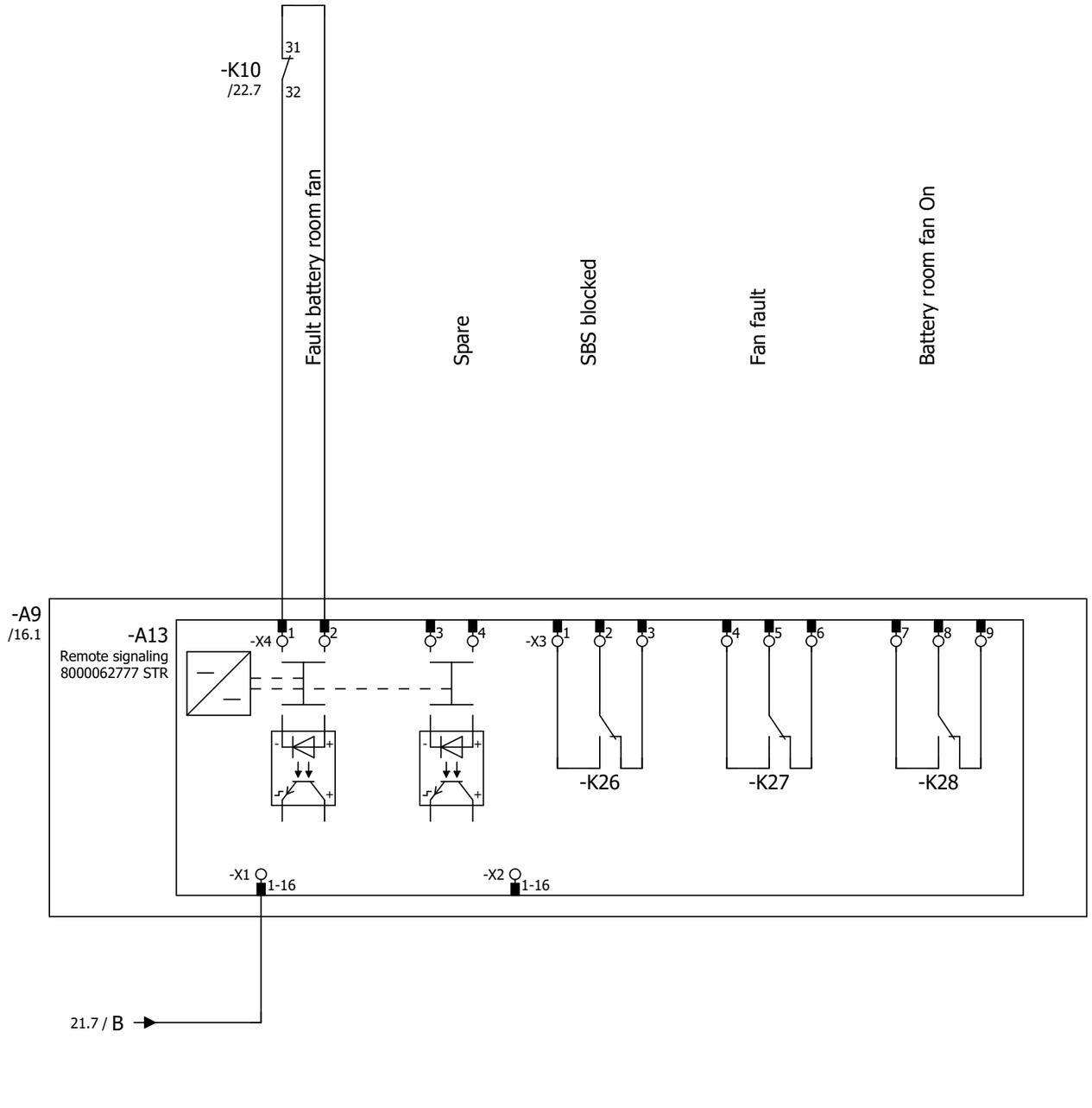
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Configuration remote signals see techn. data sheet

24V DC is permanently present in fault-free operation





PXC.2981020_PSR-SCP- 24DC/ESP4/2X1/1X2

13 — 14
23 — 24
31 — 32 /22.2

1000007888_080

				Date	28.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Remote signaling Protect 8.33 20-400-204-400		=
				Editor	Beckschäfer					+ UPS1
				Checked	Ch.Peck				1000007888.080	& EFS
Stat	Alteration	Date	Name	Norm				Circuit diagram	10009759	1000007888_080 en

A3 | sheet 22 | sheets 23

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+MBC1
Bypass transformer cabinet
with manual bypass 20 kVA
1000007888.090
10009760

GZ13_1
+MBC1/11.2

GZ13_2
+MBC1/11.3

Control cabinet heating
Mains
110-250V/N/PE~50/60Hz

back-up fuse
gG 10A

BK
R1,5 mm²

BK
R1,5 mm²

-X13 U U N N PE PE

BK
0,75 mm²

-F100 1
G
T6,3A 2

BK
0,75 mm²

L
-F85
I 3 2

BK
0,75 mm²

-A85 -X1 3 2
-R1

-X14 U U N N

BK
0,75 mm²

-F110 1
G
T6,3A 2

BK
0,75 mm²

BK
0,75 mm²

-X114 U N

-W100
H05VV
2x1 mm²
3 m

L N
-H1
Enclosure light

1000007888_080

				Date	14.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	external connection Protect 8.33 20-400-204-400 Circuit diagram		=
				Editor	EEC					+ UPS1
				Checked	Ch.Peck				1000007888.080 10009759	& EFS
Stat	Alteration	Date	Name	Norm					1000007888_080 en	A3 sheet 23 / sheets 23

CAE EPLAN Electric P8

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Terminal diagram

terminal

=+UPS1-A9-A12-X3

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1						+UPS1&EFS/21.5
				2						+UPS1&EFS/21.5
				3						+UPS1&EFS/21.5
				4						+UPS1&EFS/21.5
				5						+UPS1&EFS/21.6
				6						+UPS1&EFS/21.6
				7						+UPS1&EFS/21.6
				8						+UPS1&EFS/21.6
				9						+UPS1&EFS/21.6
				10						+UPS1&EFS/21.7
				11						+UPS1&EFS/21.7
				12						+UPS1&EFS/21.7

1000007888_080

Stat	Alteration	Date	Name		
				Date	03.06.2024
				Editor	Beckschäfer
				Checked	Ch.Peck
				Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+UPS1-A9-A12-X3
Protect 8.33 20-400-204-400

Terminal diagram

1000007888_080 en

=
+ UPS1
& EMA

A3

sheet 1
sheets 23

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1000007888_080

Terminal diagram

terminal

=+UPS1-A9-A12-X4

Cable name / Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name / Cable type	Position / Page
			1					+UPS1&EFS/21.4
			2					+UPS1&EFS/21.4
			3					+UPS1&EFS/21.4

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS1-A9-A12-X5

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1						+UPS1&EFS/21.3
				2						+UPS1&EFS/21.3

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				Date	03.06.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Terminal diagram =+UPS1-A9-A12-X5 Protect 8.33 20-400-204-400 Terminal diagram		=	
				Editor	Beckschäfer					+ UPS1	
				Checked	Ch.Peck					& EMA	A3 sheet 3
Stat	Alteration	Date	Name	Norm					1000007888_080 en		sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal
=+UPS1-A9-A12-X6

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable type	Cable name	Position / Page
				1-10		-A9-A12-X1				+UPS1&EFS/21.2

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			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS1-A9-A12-X6
Protect 8.33 20-400-204-400

Terminal diagram

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+ UPS1
& EMA

A3

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sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS1-A9-A29.1-X2

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1-9						+UPS1&EFS/20.2

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		Date	03.06.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS
		Editor	Beckschäfer		
		Checked	Ch.Peck		
Stat	Alteration Date Name	Norm			

Terminal diagram =+UPS1-A9-A29.1-X2
Protect 8.33 20-400-204-400

Terminal diagram

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= | + UPS1 | & EMA

A3

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sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS1-A9-A29.1-X4

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1-3						+UPS1&EFS/20.3

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			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS1-A9-A29.1-X4
Protect 8.33 20-400-204-400

Terminal diagram

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+ UPS1
& EMA

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sheets 23

CAE EPLAN Electric P8

Terminal diagram

Cable name	terminal =+UPS1-A9-A29.1-X5					Cable name			
Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable type			Position / Page
			1-8							+UPS1&EFS/20.3

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				Date	03.06.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm
				Editor	Beckschäfer	
				Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm		

AEG POWER SOLUTIONS

Terminal diagram =+UPS1-A9-A29.1-X5
Protect 8.33 20-400-204-400

Terminal diagram

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+ UPS1
& EMA

A3

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sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS1-A20-X3

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+UPS2-A20-X3	1-3	1-3						+UPS1&EFS/16.6

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				Editor	Beckschäfer
				Checked	Ch.Peck
Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+UPS1-A20-X3
Protect 8.33 20-400-204-400

Terminal diagram

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+ UPS1
& EMA

A3

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CAE EPLAN Electric P8

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Terminal diagram

terminal

=+UPS1-A20-X4

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1-3						+UPS1&EFS/16.7

	Date	03.06.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Terminal diagram =+UPS1-A20-X4 Protect 8.33 20-400-204-400 Terminal diagram
	Editor	Beckschäfer			
	Checked	Ch.Peck			
Stat Alteration	Norm	Date Name			1000007888_080 en

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+ UPS1
& EMA

A3

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sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS1-A20-X5

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+UPS2-A20-X5	1-4	1-4						+UPS1&EFS/16.7

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				Date	03.06.2024
				Editor	Beckschäfer
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Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+UPS1-A20-X5
Protect 8.33 20-400-204-400

Terminal diagram

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+ UPS1
& EMA

A3

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sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS1-A20-X6

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1-2						+UPS1&EFS/16.7

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				Date	03.06.2024
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Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+UPS1-A20-X6
Protect 8.33 20-400-204-400

Terminal diagram

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+ UPS1
& EMA

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sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal
=+UPS1-E1-X1

Cable name / Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name / Cable type	Position / Page
			U		-E1-X1	U		+UPS1&EFS/1.2
					-Q1	2		
	+MBC1-X1	2U	U		-E1-X1	U		+UPS1&EFS/1.2
			V		-E1-X1	V		+UPS1&EFS/1.2
					-Q1	4		
	+MBC1-X1	2V	V		-E1-X1	V		+UPS1&EFS/1.2
			W		-E1-X1	W		+UPS1&EFS/1.2
					-Q1	6		
	+MBC1-X1	2W	W		-E1-X1	W		+UPS1&EFS/1.2

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Terminal diagram

terminal
=+UPS1-E2-X2

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				L+		-L41	1.2			+UPS1&EFS/4.3
		+MBC1-X2	1L+	L+						+UPS1&EFS/4.3
				L-		-L41	2.2			+UPS1&EFS/4.2
		+MBC1-X2	1L-	L-						+UPS1&EFS/4.2

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			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS1-E2-X2
Protect 8.33 20-400-204-400

Terminal diagram

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+ UPS1
& EMA

A3

sheet 13
sheets 23

CAE EPLAN Electric P8

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Terminal diagram

terminal
=+UPS1-E3-X3

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U		-E3-X3	U			+UPS1&EFS/8.2
						-L11	2			
		+MBC1-X5	1U	U		-E3-X3	U			+UPS1&EFS/8.2
				V		-E3-X3	V			+UPS1&EFS/8.2
						-L12	2			
		+MBC1-X5	1V	V		-E3-X3	V			+UPS1&EFS/8.2
				W		-E3-X3	W			+UPS1&EFS/8.2
						-L13	2			
		+MBC1-X5	1W	W		-E3-X3	W			+UPS1&EFS/8.2
				N		-E3-X3	N			+UPS1&EFS/8.3
		+MBC1-X5	1N	N		-E3-X3	N			+UPS1&EFS/8.3
		+MBC1-X5	1N	N		-E3-X3	N			

			Date	03.06.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm
			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

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Terminal diagram =+UPS1-E3-X3
Protect 8.33 20-400-204-400

Terminal diagram

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+ UPS1
& EMA

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Terminal diagram

terminal
=+UPS1-E4-X4

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U		-E4-X4	U			+UPS1&EFS/8.6
						-A3-X4	1			
		+MBC1-X4	1U	U		-E4-X4	U			+UPS1&EFS/8.6
				V		-E4-X4	V			+UPS1&EFS/8.6
						-A3-X4	2			
		+MBC1-X4	1V	V		-E4-X4	V			+UPS1&EFS/8.6
				W		-E4-X4	W			+UPS1&EFS/8.6
						-A3-X4	3			
		+MBC1-X4	1W	W		-E4-X4	W			+UPS1&EFS/8.6
				N		-E4-X4	N			+UPS1&EFS/8.6
		+MBC1-X4	1N	N		-E4-X4	N			+UPS1&EFS/8.6
		+MBC1-X4	1N	N		-E4-X4	N			+UPS1&EFS/8.6

1000007888_080

			Date	03.06.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm
			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS1-E4-X4
Protect 8.33 20-400-204-400

Terminal diagram

1000007888_080 en

=
+ UPS1
& EMA

A3

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sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS1-F120

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		-K10	A1	1		-X120	1			+UPS1&EFS/22.7

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Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS1-F120
Protect 8.33 20-400-204-400

Terminal diagram

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= | + UPS1 | & EMA

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sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal
=+UPS1-F121

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		-K10	A2	1		-X120	2			+UPS1&EFS/22.8

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Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

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Terminal diagram =+UPS1-F121
Protect 8.33 20-400-204-400

Terminal diagram

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+ UPS1
& EMA

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sheets 23

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Terminal diagram

terminal

=+UPS1-PE

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+MBC1-PE	PE	PE						+UPS1&EFS/4.3
				PE						+UPS1&EFS/8.4
				PE						+UPS1&EFS/1.4

		Date	03.06.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS
		Editor	Beckschäfer		
		Checked	Ch.Peck		
Stat	Alteration Date Name	Norm			

Terminal diagram =+UPS1-PE
Protect 8.33 20-400-204-400

Terminal diagram

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= | + UPS1 | & EMA

A3

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sheets 23

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Terminal diagram

terminal

=+UPS1-X12

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1		-A92.1-X3	4			+UPS1&EFS/11.5
				2		-A92.2-X10	2			+UPS1&EFS/11.5
				3		-A92.2-X10	3			+UPS1&EFS/11.5
		-A24.1-X1	+	4	'	-A92.1-X20	2			+UPS1&EFS/11.7
		-A24.1-X1	-	5	'	-A92.1-X20	1			+UPS1&EFS/11.7
				6		-CU	N			+UPS1&EFS/14.7
				7		-A9-A16-X8	5			+UPS1&EFS/14.2
				8		-A9-A16-X8	4			+UPS1&EFS/14.2
				9	●	-A9-A16-X8	6			+UPS1&EFS/14.2
				10		-A9-A50-X8	1			+UPS1&EFS/12.3
				11		-A9-A50-X8	2			+UPS1&EFS/12.3
						-Q3	96			
				12	●	-A9-A16-X8	7			+UPS1&EFS/14.2
				15		-A9-A50-X8	3			+UPS1&EFS/12.3
						-Q3	95			

1000007888_080

	Date	03.06.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Terminal diagram =+UPS1-X12 Protect 8.33 20-400-204-400 Terminal diagram
	Editor	Beckschäfer			
	Checked	Ch.Peck			
Stat / Alteration / Date / Name	Norm				1000007888_080 en

= | + UPS1 | & EMA | A3 | sheet 19 | sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS1-X13

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U		-F100	1:2			+UPS1&EFS/23.2
		-X14	U	U						+UPS1&EFS/23.2
				N		-A85-X1	2			+UPS1&EFS/23.2
		-X14	N	N						+UPS1&EFS/23.3
				PE						+UPS1&EFS/23.3
				PE						+UPS1&EFS/23.3

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Date	03.06.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Terminal diagram =+UPS1-X13 Protect 8.33 20-400-204-400 Terminal diagram	=
Editor	Beckschäfer				+ UPS1
Checked	Ch.Peck				& EMA
Norm				1000007888_080 en	A3
Stat / Alteration / Date / Name					sheet 20 / sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS1-X14

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		-X13	U	U		-F110	1:2			+UPS1&EFS/23.7
		+MBC1-X13	U	U						+UPS1&EFS/23.7
		-X13	N	N		-X114	N			+UPS1&EFS/23.7
		+MBC1-X13	N	N						+UPS1&EFS/23.7

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			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS1-X14
Protect 8.33 20-400-204-400

Terminal diagram

1000007888_080 en

=
+ UPS1
& EMA

A3

sheet 21
sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS1-X15

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1		-A9-A50-X8	4			+UPS1&EFS/12.6
				1		-C711				+UPS1&EFS/12.7
				2		-C712				+UPS1&EFS/12.7
		+MBC1-X15	2	2		-A9-A50-X5	5			+UPS1&EFS/12.8
		+MBC1-X15	3	3		-A9-A50-X5	6			+UPS1&EFS/12.8

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			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS1-X15
Protect 8.33 20-400-204-400

Terminal diagram

1000007888_080 en

= | + UPS1 | & EMA

A3

CAE EPLAN Electric P8

Terminal diagram

terminal
=+UPS1-X120

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1	'	-F120	1:1			+UPS1&EFS/22.7
				2	'	-F121	1:1			+UPS1&EFS/22.8

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AEG POWER SOLUTIONS

Terminal diagram =+UPS1-X120
Protect 8.33 20-400-204-400

Terminal diagram

1000007888_080 en

=
+ UPS1
& EMA

A3

sheet 23
sheets 23

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Three-phase input
Attention! Observe sequence of wires, L1, L2, L3 -->
See technical data sheet for required mains fuses

Power section rectifier

mains transformer

Note: Reinforced insulated wire
0,75 mm² unmarked wires

-L61 N=2

Measurement REC Interface -A9-A50-X2
Supply REC Interface -A9-A50-X3

01L1 / 12.6
01L2 / 12.6
01L3 / 12.6
02L1 / 11.1
02L2 / 11.1
02L3 / 11.1

-L22
-T40
-L85.1
-L85.2

1L1 / 2.1
1L2 / 2.1
1L3 / 2.1
2L1 / 3.1
2L2 / 3.1
2L3 / 3.1

-C101.1
-C101.2
-C101.3
-Q3
-Q1
L=100/85A
I=1,0kA
Icu=50kA
/12.4
/12.3
3xR6 mm²

-L23 -L24 -L25
-R23 -R24 -R25
-C23 -C24 -C25

-A80
-A81
Suppression
-R86 -R87 -R88
-R81 -R82 -R83
-V81.1-V81.6
-R84.1 -R84.2
-C84
-C85

-E1
-X1 -A2 -A1
EMI capacitor 4-pole 8000022634 STR
-C4 -C5 -C1 -C6 -C2 -C7 -C3 -C8 -C9 -C10
-X1 -X2 -X3

-L92

Mains
400V;3/PE~50HZ

GZ1_1 GZ1_2 GZ1_3

Rack
-PE
PE busbar
Cu 40x5 mm
GNYE 6 mm²
Tür links
Pivot plate

+MBC1
Bypass transformer cabinet
with manual bypass 20 kVA
1000007888.090
10009760

1000007888_080

				Date	27.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Rectifier input Protect 8.33 20-400-204-400 Circuit diagram	1000007888.080 10009759
				Editor	Beckschäfer				
				Checked	Ch.Peck				
Stat	Alteration	Date	Name	Norm					

1000007888_080 en

= + UPS2 & EFS

A3 sheet 1 sheets 23

Power section rectifier

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-A1
/3.1

4.1 / 2L+ -L+:X2:1 → 1L+ / 3.2

1.8 / 1L1 -L1:X1:1
1.8 / 1L2 -L2:X1:2
1.8 / 1L3 -L3:X1:3

-C85.1 -C85.2 -C85.3

-T80 -T81

-V1 -V2 -V3

-A82 REC suppression 6765463 STR
-K
-AK1
-AK2
-AK3
-A

4.1 / 2L- -L-:X2:2 → 1L- / 3.2

RD

-A80 REC trigger circuit 8000023368 STR
-X6:1
2

-X7 -X8 -X3 -X4 -X5

GR-Strom 15 GND 16 V2 4 V1 2 V4 8 V3 6 V6 12 V5 10 GND 1 GND 3 +24V 13 +24V 14 V12 20 V11 18 V14 24 V13 22 V16 28 V15 26 GND 17 GND 19 +24V 29 +24V 30

V12 4
V11 2
V14 8
V13 6
V16 12
V15 10
GND 1
GND 3
+24V 13
+24V 14

-X2 1-40 → 0FB2 / 3.1 REC triggering -A1-A81-X1

-X9 1 2
-R100
-X1 1-40

-0FB1
40x

REC interface -A9-A50-X1 → 0FB1 / 12.4

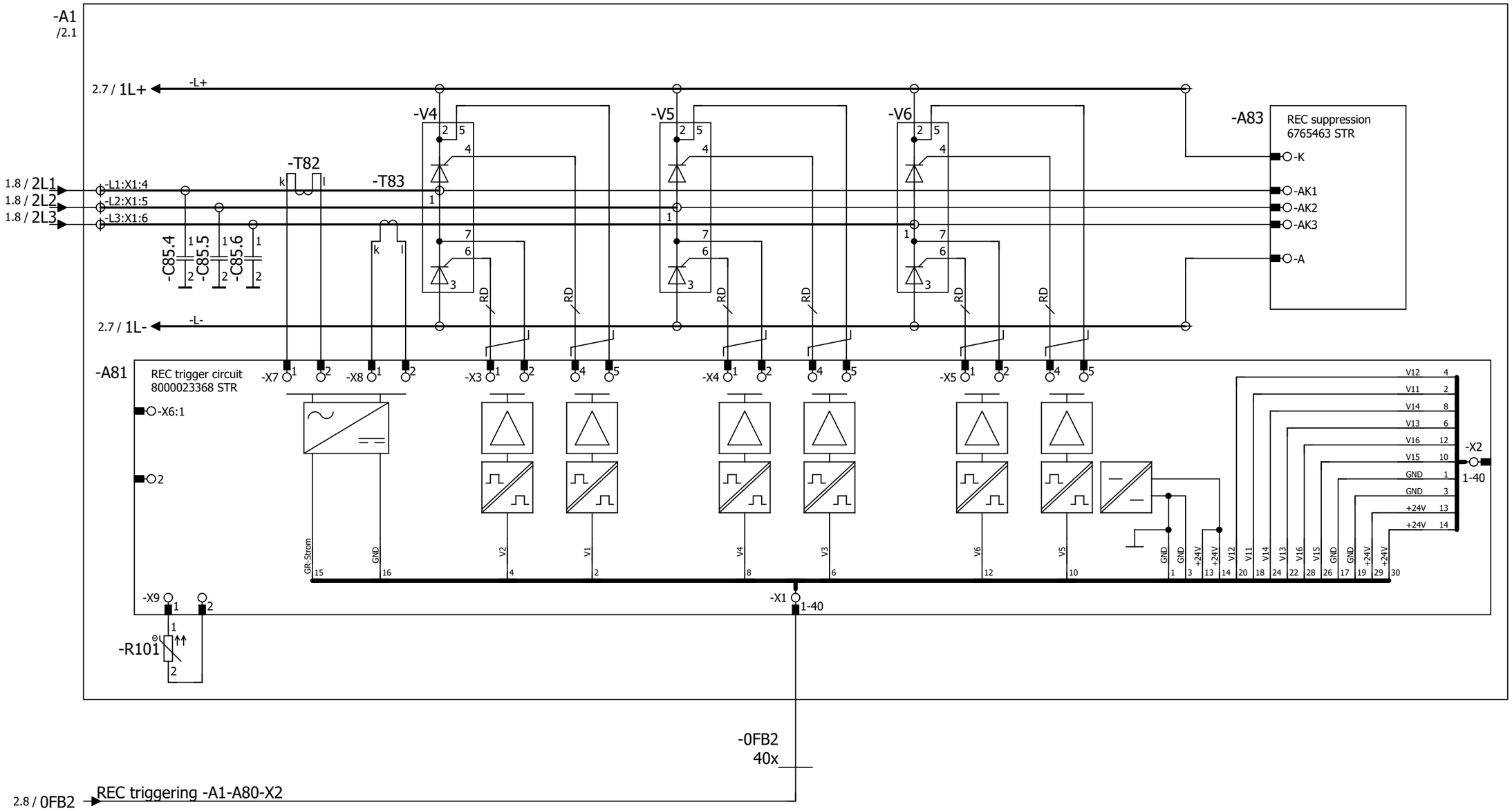
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				Date	27.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Power section rectifier Protect 8.33 20-400-204-400 Circuit diagram		=	
				Editor	Beckschäfer					+ UPS2	
				Checked	Ch.Peck				1000007888.080 10009759	& EFS	A3 sheet 2 / sheets 23
Stat	Alteration	Date	Name	Norm					1000007888_080 en		

Power section rectifier

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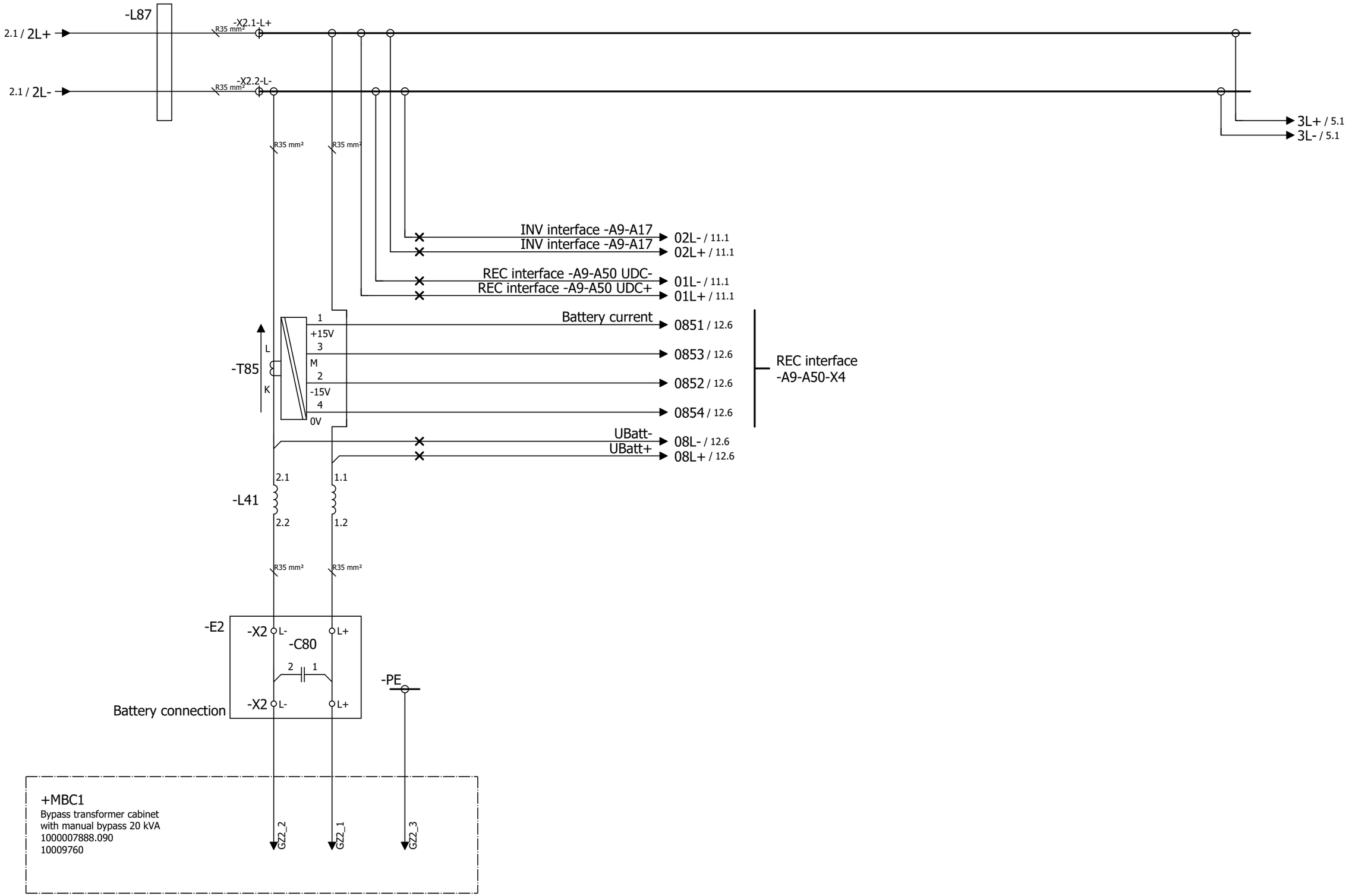
				Date	27.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Power section rectifier Protect 8.33 20-400-204-400 Circuit diagram
				Editor	Beckschäfer			
				Checked	Ch.Peck			
Stat	Alteration	Date	Name	Norm				

			=	
			+ UPS2	
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			sheet	3
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Power section rectifier
Battery connection



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				Checked	Ch.Peck				1000007888.080 10009759	& EFS
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Power section inverter

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-A2

4.8 3L+ -L+:X2:1

-V11 -V12 -V13

C1 G1 E1 C2E1 G2 E2

-C86.1 -C86.2 -R42 -C42

6.1 / 3L1 -X3:1
6.1 / 3L2 -X3:2
6.1 / 3L3 -X3:3

4.8 3L- -L-:X2:2

RD

-A1

INV. trigger circuit
8000021689 STR

-X31 -X32 -X41 -X42 -X51 -X52

-X6:1

-X6:3

4 / 5.7 2 / 5.7 8 / 5.7 6 / 5.7 12 / 5.7 10 / 5.7

U_{CE}

IMP1 ZWST1 IMP2 IMP3 ZWST2 IMP4 IMP5 ZWST3 IMP6 ZWST4 ZWST5 ZWST6 GND +24V

4 13 2 8 14 6 12 15 10 16 17 18 1 19 20 21 22

5.3 / 2 IMP2 2
5.2 / 4 IMP1 4
5.5 / 6 IMP4 6
5.4 / 8 IMP3 8
5.7 / 10 IMP6 10
5.6 / 12 IMP5 12
ZWST4 16
ZWST5 14
ZWST6 15
GND 1
+24V 19
+24V 20

-X2 1-34

-X7 1 2

-R100

-X1 1-34

-0FB3 34x

INV interface -A9-A17-X10

0FB3 / 13.1

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Stat	Alteration	Date	Name	Norm				Circuit diagram	1000007888.080 10009759

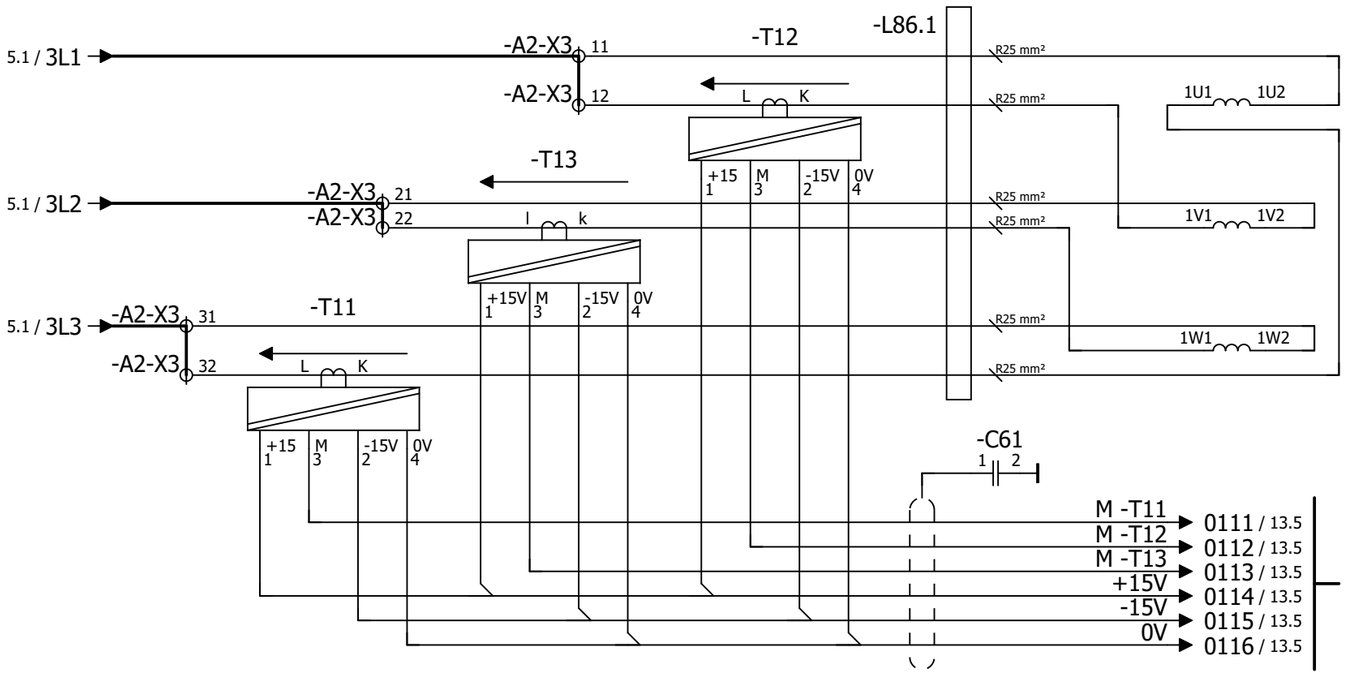
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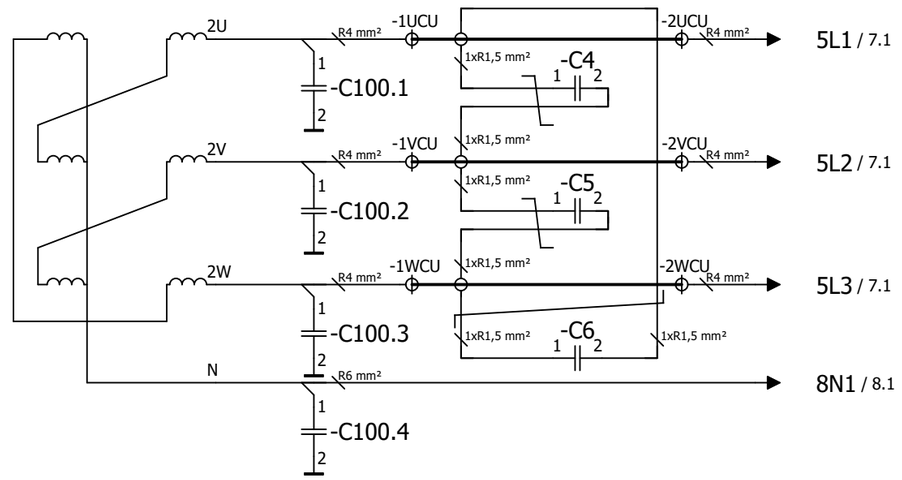
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Power section inverter

Measuring INV current dynamic



-T1



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				Checked	Ch.Peck				1000007888.080	& EFS	A3 sheet 6
Stat	Alteration	Date	Name	Norm				Circuit diagram	10009759	1000007888_080 en	sheets 23

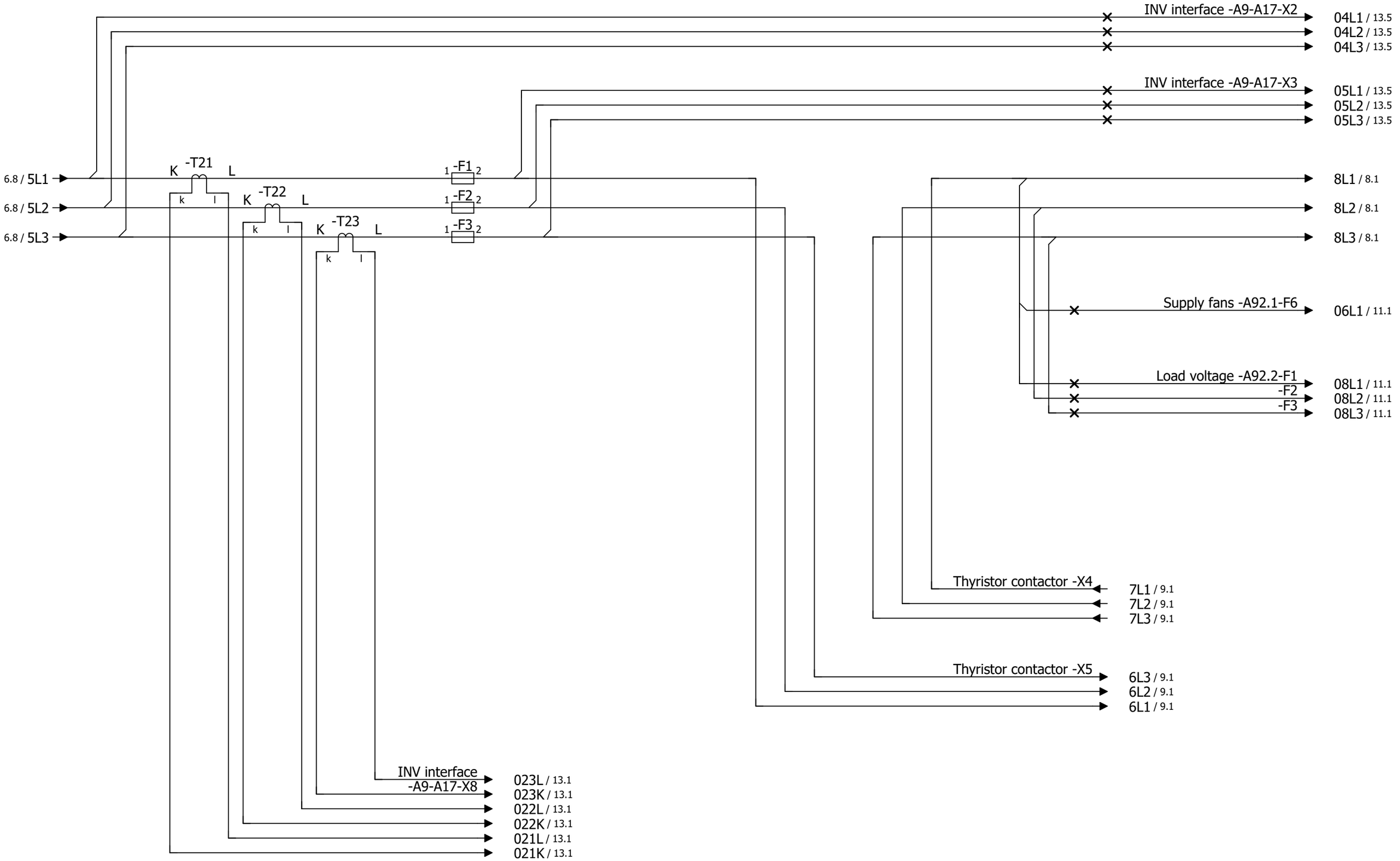
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Power section inverter

Measurement INV current static

Output fuse



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Power section inverter

Parallel preventive choke coil

7.8 / 8L1
7.8 / 8L2
7.8 / 8L3
6.8 / 8N1

-L11 -L12 -L13

R4 mm² R25 mm² 2xR35 mm²

SBS Output
10L1 / 10.1
10L2 / 10.1
10L3 / 10.1

-A105
-C56 -C57 -C58
-X1 -X2 -X3 -X4

SBS Input
9L1 / 10.1
9L2 / 10.1
9L3 / 10.1

fan neutral conductor
0451N1 / 17.1

neutral conductor
04N1 / 13.5
-A9

-E3
-X3 U V W N
-A4 -X4 EMI capacitor 4-pole 8000022634 STR
-C4 -C5 -C1 -C6 -C2 -C7 -C3 -C8 -C9 -C10
-X1 -X2 -X3
-L93
-A3 -X4 EMI capacitor 4-pole 8000022634 STR
-C4 -C5 -C1 -C6 -C2 -C7 -C3 -C8 -C9 -C10
-X1 -X2 -X3
-X3 U V W N

Load
400V;3/N/PE~50Hz

-PE

-E4
-X4 U V W N
-A4 -X4 EMI capacitor 4-pole 8000022634 STR
-C4 -C5 -C1 -C6 -C2 -C7 -C3 -C8 -C9 -C10
-X1 -X2 -X3
-L94
-A3 -X4 EMI capacitor 4-pole 8000022634 STR
-C4 -C5 -C1 -C6 -C2 -C7 -C3 -C8 -C9 -C10
-X1 -X2 -X3
-X4 U V W N

Mains
400V;3/N/PE~50Hz

GZ3_1 GZ3_2 GZ3_3 GZ3_4
GZ4_1 GZ4_2 GZ4_3 GZ4_4

+MBC1
Bypass transformer cabinet
with manual bypass 20 kVA
1000007888.090
10009760

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				Checked	Ch.Peck			1000007888.080 10009759	1000007888_080 en
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Power section inverter
Inverter output contactor

-A4

-A37 SBS suppression 8000028996 STR

-A3 -K3 -AK3 -A2 -K2 -AK2 -A1 -K1 -AK1

-V31

-X4:1AC
-X4:1
-X4:1K

A K AK G2 K2 K1 G1

-V33

-X4:2AC
-X4:2
-X4:2K

-V35

-X4:3AC
-X4:3
-X4:3K

RD

-A36 SBS trigger circuit 8000028563 STR

-X2 -X3 -X4 1 2 5 4

-X5:1
2

EIN

GND 1 | EUE_EIN 2 | GND 3 | GND 4 | +24V 5 | +24V 6 | 7 | 8 | 9 | 10

-X6 1 2
-X1 1-10

1
-R100
2

-0FB10
10x

-X6 5
-X6 6
-X6 3
-X6 4
-X6 1
-X6 2

7.7 / 7L1
7.7 / 7L2
7.7 / 7L3

7.7 / 6L3 -X5:3
7.7 / 6L2 -X5:2
7.7 / 6L1 -X5:1

INV interface -A9-A17-X1 → 0FB10 / 13.1

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Power section SBS

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-A3

-A37 SBS suppression 8000028996 STR

-A3 -K3 -AK3 -A2 -K2 -AK2 -A1 -K1 -AK1

SBS mains voltage -A92.2-F6 → 010L1 / 11.1
-A92.2-F7 → 010L2 / 11.1
-A92.2-F8 → 010L3 / 11.1

8.8 / 9L1 SBS mains
8.8 / 9L2 SBS mains
8.8 / 9L3 SBS mains

-V31 -V33 -V35

-X4:1AC -X4:1 -X4:1K
-X4:2AC -X4:2 -X4:2K
-X4:3AC -X4:3 -X4:3K

A K AK G2 K2 K1 G1 RD

-X2 -X3 -X4

-A36 SBS trigger circuit 8000028563 STR

-X5:1
2

EIN: GND 1 | EUE_EIN 2 | GND 3 | GND 4 | +24V 5 | +24V 6 | 7 | 8 | 9 | 10

-X6 1 2
-R100

-X1 1-10

SBS interface -A9-A16-X1 → 0FB9 / 14.3

-X6 5
-X6 6
-X6 3
-X6 4
-X6 1
-X6 2

8.8 / 10L3 UPS Output
8.8 / 10L2
8.8 / 10L1

-X5:3
-X5:2
-X5:1

SBS interface -A9-A16-X4 → 03151L / 14.3
-A9-A16-X4 → 03151K / 14.3
-A9-A16-X4 → 03352L / 14.3
-A9-A16-X4 → 03352K / 14.3
-A9-A16-X4 → 03553L / 14.3
-A9-A16-X4 → 03553K / 14.3

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Power section SBS
Protect 8.33 20-400-204-400
Circuit diagram

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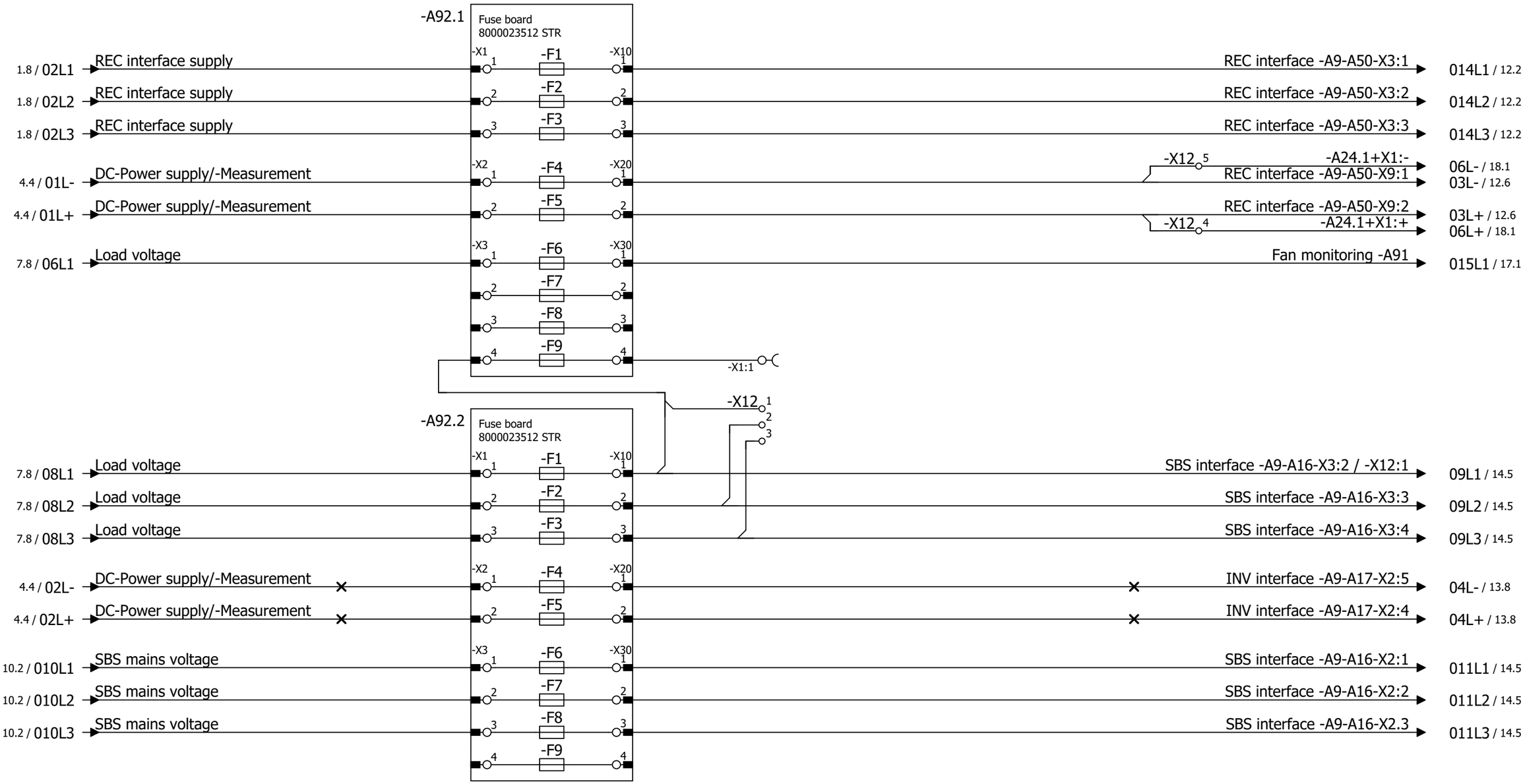
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A3

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Fuse boards

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Rectifier control

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-A9
/16.1

4.4 / 0854
4.4 / 0851
4.4 / 0853
4.4 / 0852
Battery current transformer -T85

4.4 / 08L+
4.4 / 08L-
UBatt+
UBatt-

11.8 / 03L+
11.8 / 03L-
UIC+ A92.1-F5
UIC- A92.1-F4

1.8 / 01L3
1.8 / 01L2
1.8 / 01L1
-Q1 REC input voltage

11.8 / 014L3
11.8 / 014L2
11.8 / 014L1
-T40 sec. supply REC

2.8 / 0FB1
REC trigger circuit -A1-A80-X1

-A50
/16.2
REC interface
8000022025 STR

-X3 1 2 3
-X5 7 8
-X1 1-40
-X2 1 3 5
-X9 1 2 3 4
-X4 2 3 1 4
-15V +15V

GND V1 GND V2 V3 V4 V5 V6 +24V +24V GND V11 GND V12 V13 V14 V15 V16 +24V +24V REC current
+24V
+24V

-R204
-R206
REC current stack A1
REC current stack A2

-X11 1-50
-A50X11__50x
-X12 1-50
-A50X12__50x

-A1
REC control
8000014119 STR

-X19 1 2 3
-X15 1 4
-X8 1 2 3
-X5 3 4 +24V DC
-X8 5 6
-X8 4 5 6
-X5 5 6

-X130 1 2
-X12 10 11 15
-Q3
/1.4
96 98
95
-Q1 C1 C2

BK R1,5 mm²
-C711 220000µF
-C712 220000µF
BK R2,5 mm²
BK R2,5 mm²
BK R1,5 mm²
BK R1,5 mm²
0V
-X15 1 1
-X15 2 2 (+) 3 (-)
*1

+MBC1
Bypass transformer cabinet
with manual bypass 20 kVA
1000007888.090
10009760

GZ130_1 +MBC1/3.7
GZ130_2 +MBC1/3.7

GZ15_2 +MBC1/3.4
GZ15_3 +MBC1/3.4

*1 Attention! In the event of battery undervoltage < 130 V, the UPS automatically switches off battery isolator Q2.
If this happens, switch X15:3 must be switched into the open position (undervoltage trip blocked).
For restart, please refer to the chapter in the UPS operating instructions (charging the DC link capacitors).
Unlock the tripped switch Q2 by switching to open position.
After charging the DC link capacitors, switch on Q2.
Attention! When the battery voltage reaches > 200 V, switch X15:3 must be switched back to the closed position.

+MBC1
Bypass transformer cabinet
with manual bypass 20 kVA
1000007888.090
10009760

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AEG POWER SOLUTIONS

Rectifier control
Protect 8.33 20-400-204-400

Circuit diagram

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= + UPS2 & EFS

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Inverter control

INV current static

7.3 / 023L Transformer -T23
7.3 / 023K
7.3 / 022L Transformer -T22
7.3 / 022K
7.3 / 021L Transformer -T21
7.3 / 021K

INV. trigger circuit
-A2-A1-X1
5.8 / 0FB3

Trigger circuit
-A4-A36-X1
9.7 / 0FB10

INV current dynamic

7.8 / 05L1 INV output voltage reference
7.8 / 05L2
7.8 / 05L3
8.8 / 04N1 neutral conductor → N → 05N1 / 14.5
7.8 / 04L1 INV output voltage
7.8 / 04L2
7.8 / 04L3

6.5 / 0116 Transformer -T11...-T13
6.5 / 0115
6.5 / 0113
6.5 / 0112
6.5 / 0111
6.5 / 0114

11.8 / 04L+ UIC+
11.8 / 04L- UIC-

-A9
/16.1

-A17
/16.3
INV interface
8000022441 STR

-X1 1-10: GND, SBS_ON, GND, GND, +24V, +24V → +24V
-X10 1-34: IMP1, IMP2, IMP5, IMP6, ZWST1, ZWST3, +24V, +24V, GND → +24V
-X4 1 2 3 4 5 6 -X8 6
-X13 2 3 1 4: -15V, +15V
-X20 4 1 2 3 5 6: +15V, -15V
-X19 4 1 2 3 5 6: +15V, -15V
-X2 1W 2V 3U -X3 1N 2U 3V 4W
-X2 5 4

-R203 -R205 -R207
-R204 -R206 -R208
INV current static

-S201
-S202
-S203
INV current dynamic

-X11 1-50: 48 14 13 12 17 21 23 49
-X12 1-50: 27 28 21 22 19 20 23 48 46 50 47 45 49 32 29 30 31 39 38 37 1 2

-A17X11 50x
-A17X12 50x

-A1
INV control
8000042636 STR

-X11 1-50: 48 14 13 12 17 21 23 49
-X12 1-50: 27 28 21 22 19 20 23 48 46 50 47 45 49 32 29 30 31 39 38 37 1 2

-X15 1 4
-X5 1 2 (+)
-X5 5 6 (+)
-X8 8 7
-X5 3 4 (+)
-X8 1 2

1000007888_080

				Date	27.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Inverter control Protect 8.33 20-400-204-400 Circuit diagram	1000007888.080 10009759	= / + UPS2 / & EFS
				Editor	Beckschäfer					
				Checked	Ch.Peck					
Stat	Alteration	Date	Name	Norm					1000007888_080 en	A3 sheet 13 / sheets 23

Control SBS

CAE EPLAN Electric P8

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-A9 /16.1

10.4 / 03553L Transformer -T35
10.4 / 03553K
10.4 / 03352L Transformer -T33
10.4 / 03352K
10.4 / 03151L Transformer -T31
10.4 / 03151K

11.8 / 09L1 Load voltage
11.8 / 09L2
11.8 / 09L3

13.8 / 05N1 neutral conductor → -X1:3 → -X12 6

11.8 / 011L1 SBS mains voltage
11.8 / 011L2
11.8 / 011L3

10.2 / 0FB9 SBS trigger circuit -A3-A36-X1

-L62

-A16 /16.4
SBS interface
8000022378 STR

-X1 1-10: 1 GND, 2 SBS_ON, 3 GND, 4 GND, 5 +24V, 6 +24V, 7 8 9 10; +24V

-X4 1 2 3 4 5 6

SBS current

-X2 1U 2V 3W
-X3 1N 2U 3V 4W

-X12 12 → -X8 7
7 → 5
8 → 4
9 → 6
-X18 1 → 1
2 → 2

-R120 1 2

-R201 -R203 -R205
-R202 -R204 -R206

15 16 26 17 21 29 30 27 45 46 35 36 33 41 42 39

-X11 1-50
-X12 1-50

-A16X11 ___ 50x
-A16X12 ___ 50x

-A1
SBS control
8000008845 STR

-X15 1 2 3 +24V 4 5

Fan control -A92.1-X6
091.11 / 17.7
091.12 / 17.7
091.13 / 17.7
091.14 / 17.7
091.15 / 17.7

1000007888_080

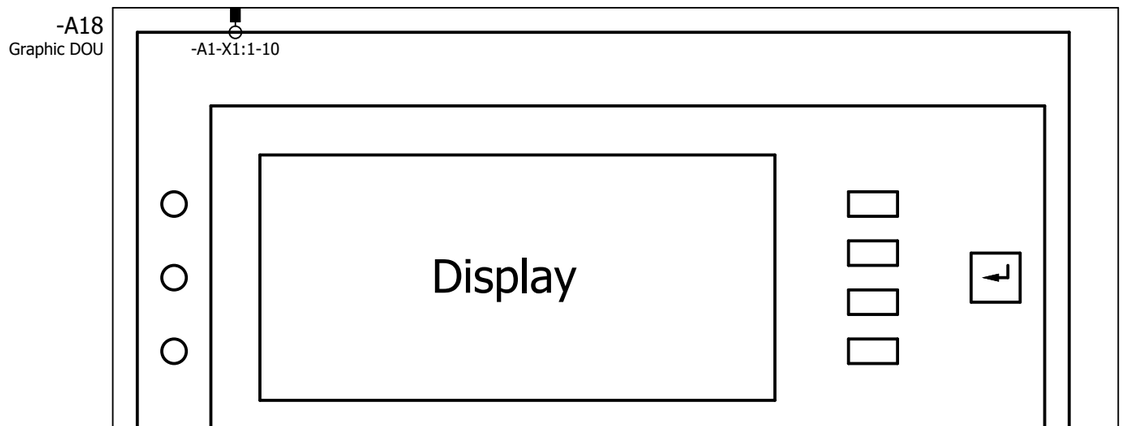
				Date	27.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Control SBS Protect 8.33 20-400-204-400 Circuit diagram	=
				Editor	Beckschäfer				+ UPS2
				Checked	Ch.Peck			1000007888.080 10009759	1000007888_080 en
Stat	Alteration	Date	Name	Norm					& EFS

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Control

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DOU-CAN

A / 16.1

1000007888_080

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				Editor	Beckschäfer					+ UPS2
				Checked	Ch.Peck				1000007888.080 10009759	& EFS
Stat	Alteration	Date	Name	Norm					1000007888_080 en	A3 sheet 15 / sheets 23

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Control

+UPS1
Protect 8.33 20-400-204-400
1000007888.080
10009759

GZ20_3
+UPS1/16.6

GZ20_5
+UPS1/16.7

INV
-CAN

INV
-sync

-A9
/12.1
/13.1
/14.2
/20.1
/21.1
/22.1

-A50
/12.1
REC interface
8000022025 STR

-X6 1-10
-X7 1-16

-A17
/13.1
INV interface
8000022441 STR

-X6 1-10
-X7 1-16

-A16
/14.2
SBS interface
8000022378 STR

-X6 1-10
-X7 1-16

-A20
Parallel Adapter
8000023378 STR

-X3 1-3
-X4 1-3
-X5 1-4
-X6 1-2

-X1 1-16
-X2 1-16
-X11 1-10
-X12 1-10
-X13 1-10
-X14 1-10

Parallel CAN INV

Parallel CAN REC

15.8 / A

DOU-CAN

A / 20.1

O / 19.1
K / 18.1
L / 18.1

1000007888_080

				Date	27.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Control CAN Protect 8.33 20-400-204-400 Circuit diagram		=
				Editor	Beckschäfer					+ UPS2
				Checked	Ch.Peck			1000007888.080 10009759	1000007888_080 en	& EFS
Stat	Alteration	Date	Name	Norm						A3 sheet 16 / sheets 23

Fan control/monitoring

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11.8 / 015L1

8.8 / 0451N1

-A91.1
Fan control
8000022841 STR

-X5 1 2 3

-R5
-C5

-S1
-S2

= 1

Logical evaluation
fan fault

-X7 1 2 3 4 5

Fan speed
+24V

P2 P4 P6 P8
-R50 -R51 -R60 -R61 -R70 -R71 -R80 -R81
P1 P3 P5 P7

-R1 PTC
-R2 PTC
-R3 PTC
-R4 PTC

-X1 -X2 -X3 -X4 2 1

-X6 1 2 3 4 5

-C31 -C32 -C33 -C34
1 2

-X91 -X92 -X93 -X94
2 3 1
N L

-M1 -M2 -M3 -M4
M 1~
PE

14.6 / 091.11
14.6 / 091.12
14.6 / 091.13
14.6 / 091.14
14.6 / 091.15
SBS interface -A9-A16-X15

1000007888_080

				Date	27.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Fan control/monitoring Protect 8.33 20-400-204-400 Circuit diagram	=
				Editor	Beckschäfer				+ UPS2
				Checked	Ch.Peck			1000007888.080 10009759	& EFS
Stat	Alteration	Date	Name	Norm				1000007888_080 en	A3 sheet 17 / sheets 23

CAE EPLAN Electric P8

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+MBC1
Bypass transformer cabinet
with manual bypass 20 kVA
1000007888.090
10009760

GZ91_1
+MBC1/3.5

GZ92_1
+MBC1/3.5

-F91 1
G
F3,15A 2

-F92 1
G
F3,15A 2

11.8 / 06L+

07L+ / 19.1

-A24.1
Battery charge monitoring
BLÜ-PRO
(Option)

-X1 +
M
-
-
-
-
0 ... 5V
-X1 -
-X3 1-16
-X4 1-10

-A24.2
Battery charge monitoring
BLÜ-PRO
(Option)

-X1 +
M
-
-
-
-
0 ... 5V
-X1 -
-X3 1-16
-X4 1-10

16.8 / L

16.8 / K

11.8 / 06L-

07L- / 19.1

1000007888_080

				Date	27.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	battery charging circuit monitoring Protect 8.33 20-400-204-400 Circuit diagram	=
				Editor	Beckschäfer				+ UPS2
				Checked	Ch.Peck			1000007888.080 10009759	1000007888_080 en
Stat	Alteration	Date	Name	Norm					& EFS

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Control

CAE EPLAN Electric P8

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+MBC1
Bypass transformer cabinet
with manual bypass 20 kVA
1000007888.090
10009760

GZ93_1
+MBC1/3.6

-F93 1
G
F3,15A 2

18.8 / 07L+

-A24.3
BLÜ-PRO battery charging circuit
monitoring system

-X1 +
M
-
-
-
-
0 ... 5V
-X1 -
-X3 1-16
-X4 1-10

16.8 / O

18.8 / 07L-

1000007888_080

				Date	27.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	battery charging circuit monitoring Protect 8.33 20-400-204-400 Circuit diagram	=
				Editor	Beckschäfer				+ UPS2
				Checked	Ch.Peck			1000007888.080 10009759	1000007888_080 en
Stat	Alteration	Date	Name	Norm					& EFS

A3 | sheet 19 | sheets 23

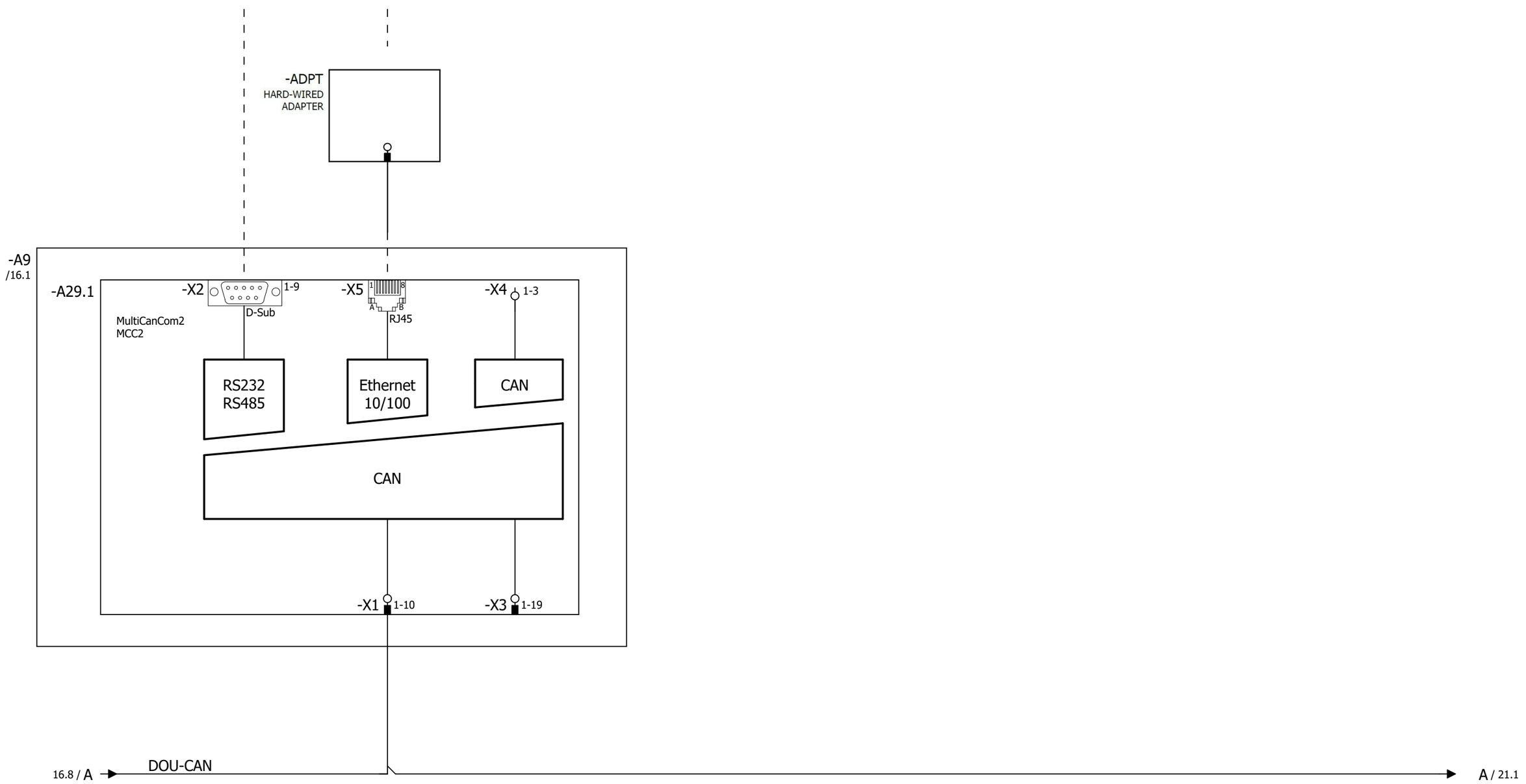
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Control

SNMP adapter
CompuWatch
Service Tools
Modbus

Modbus



16.8 / A → DOU-CAN → A / 21.1

1000007888_080

				Date	27.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	MultiCom Protect 8.33 20-400-204-400 Circuit diagram		=
				Editor	Beckschäfer					+ UPS2
				Checked	Ch.Peck				1000007888.080 10009759	1000007888_080 en & EFS
Stat	Alteration	Date	Name	Norm						A3 sheet 20 sheets 23

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CAE EPLAN Electric P8

Remote signaling

CAN Service

Configuration remote signals
see techn. data sheet

INV remote off
Common fault
Inverter operation
SBS operation
REC fault
REC mains fault
Battery low

-A9
/16.1

-A12
Remote signaling
8000062777 STR

-X6 1-10
-X5 1 2
-X4 1 2 3
-X3 1 2 3
4 5 6
7 8 9
10 11 12

-K25
-K21
-K22
-K23
-K24

-X1 1-10
-X2 1-16

20.8 / A

B / 22.1

1000007888_080

				Date	27.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Remote signaling Protect 8.33 20-400-204-400	=
				Editor	Beckschäfer				+ UPS2
				Checked	Ch.Peck			1000007888.080	& EFS
Stat	Alteration	Date	Name	Norm				Circuit diagram	10009759

1000007888_080 en

A3

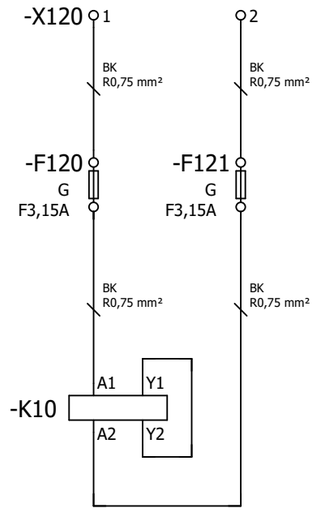
sheet 21
sheets 23

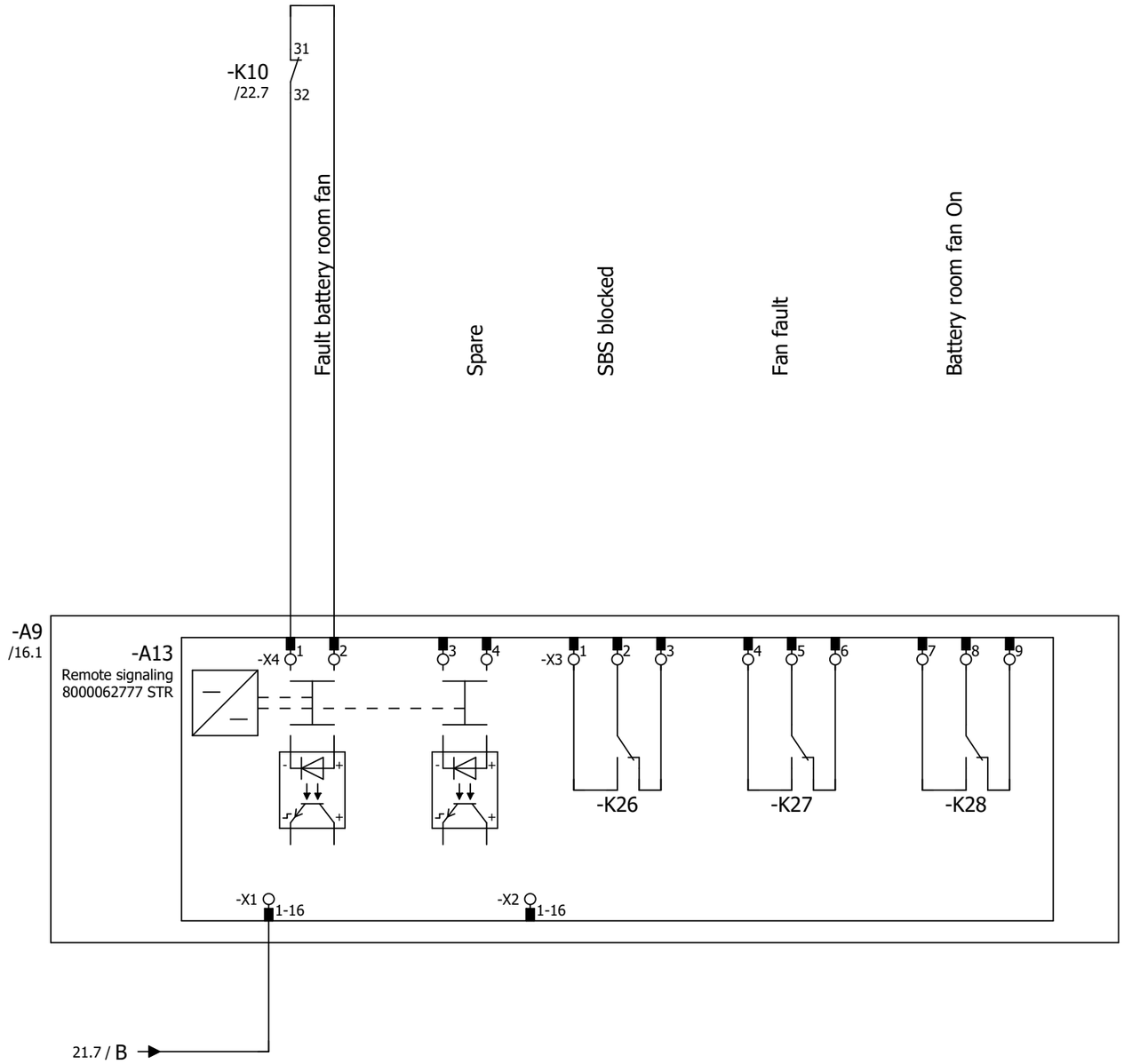
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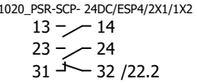
Configuration remote signals
see techn. data sheet

24V DC is permanently present
in fault-free operation





PXC.2981020_PSR-SCP- 24DC/ESP4/2X1/1X2



1000007888_080

				Date	28.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	Remote signaling Protect 8.33 20-400-204-400		=
				Editor	Beckschäfer					+ UPS2
				Checked	Ch.Peck					& EFS
Stat	Alteration	Date	Name	Norm				Circuit diagram	1000007888.080 10009759	1000007888_080 en

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CAE EPLAN Electric P8

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+MBC1
Bypass transformer cabinet
with manual bypass 20 kVA
1000007888.090
10009760

GZ13_1
+MBC1/11.6

GZ13_2
+MBC1/11.7

BK
R1,5 mm²

BK
R1,5 mm²

-X13 U U N N PE PE

BK
0,75 mm²

-F100
G
T6,3A
1
2

BK
0,75 mm²

BK
0,75 mm²

L
-F85
3
2

-A85
-X1 3
2
-R1

-X14 U U N N

BK
0,75 mm²

-F110
G
T6,3A
1
2

BK
0,75 mm²

BK
0,75 mm²

-X114 U N

-W100
H05VV
2x1 mm²
3 m

L N

-H1
Enclosure light

1000007888_080

				Date	27.05.2024	ROSETTI MARINO Hollandse Kust Noord (HKN) wind farm	AEG POWER SOLUTIONS	external connection Protect 8.33 20-400-204-400		=
				Editor	Beckschäfer					+ UPS2
				Checked	Ch.Peck				1000007888.080 10009759	& EFS
Stat	Alteration	Date	Name	Norm				Circuit diagram	1000007888_080 en	A3 sheet 23 / sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-A9-A12-X3

Cable name / Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name / Cable type	Position / Page
			1					+UPS2&EFS/21.5
			2					+UPS2&EFS/21.5
			3					+UPS2&EFS/21.5
			4					+UPS2&EFS/21.5
			5					+UPS2&EFS/21.6
			6					+UPS2&EFS/21.6
			7					+UPS2&EFS/21.6
			8					+UPS2&EFS/21.6
			9					+UPS2&EFS/21.6
			10					+UPS2&EFS/21.7
			11					+UPS2&EFS/21.7
			12					+UPS2&EFS/21.7

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Terminal diagram

terminal

=+UPS2-A9-A12-X4

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1						+UPS2&EFS/21.4
				2						+UPS2&EFS/21.4
				3						+UPS2&EFS/21.4

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Stat	Alteration	Date	Norm		

AEG POWER SOLUTIONS

Terminal diagram =+UPS2-A9-A12-X4
Protect 8.33 20-400-204-400

Terminal diagram

1000007888_080 en

= +UPS2 & EMA

A3

sheet 2
sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-A9-A12-X5

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1						+UPS2&EFS/21.3
				2						+UPS2&EFS/21.3

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		Editor	Beckschäfer		
		Checked	Ch.Peck		
Stat	Alteration Date Name	Norm			

Terminal diagram =+UPS2-A9-A12-X5
Protect 8.33 20-400-204-400

Terminal diagram

1000007888_080 en

= UPS2 & EMA

A3

sheet 3
sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal
=+UPS2-A9-A12-X6

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1-10		-A9-A12-X1				+UPS2&EFS/21.2

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			Editor	Beckschäfer	
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Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS2-A9-A12-X6
Protect 8.33 20-400-204-400

Terminal diagram

1000007888_080 en

= | + UPS2 | & EMA

A3

sheet 4
sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-A9-A29.1-X2

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1-9						+UPS2&EFS/20.2

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			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS2-A9-A29.1-X2
Protect 8.33 20-400-204-400

Terminal diagram

1000007888_080 en

= +UPS2 & EMA

A3

sheet 5
sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-A9-A29.1-X4

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1-3						+UPS2&EFS/20.3

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			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS2-A9-A29.1-X4
Protect 8.33 20-400-204-400

Terminal diagram

1000007888_080 en

=
+ UPS2
& EMA

A3

sheet 6
sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-A9-A29.1-X5

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1-8						+UPS2&EFS/20.3

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		Editor	Beckschäfer		
		Checked	Ch.Peck		
Stat	Alteration Date Name	Norm			

Terminal diagram =+UPS2-A9-A29.1-X5
Protect 8.33 20-400-204-400

Terminal diagram

1000007888_080 en

= + UPS2 & EMA

A3

sheet 7
sheets 23

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Terminal diagram

terminal

=+UPS2-A20-X3

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+UPS1-A20-X3	1-3	1-3						+UPS2&EFS/16.6

1000007888_080

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-A20-X4

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1-3						+UPS2&EFS/16.7

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			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS2-A20-X4
Protect 8.33 20-400-204-400

Terminal diagram

1000007888_080 en

= | + UPS2 | & EMA

A3

sheet 9
sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-A20-X5

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+UPS1-A20-X5	1-4	1-4						+UPS2&EFS/16.7

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				Date	03.06.2024
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				Checked	Ch.Peck
Stat	Alteration	Date	Name	Norm	

ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+UPS2-A20-X5
Protect 8.33 20-400-204-400

Terminal diagram

1000007888_080 en

=
+ UPS2
& EMA

A3

sheet 10
sheets 23

CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-A20-X6

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1-2						+UPS2&EFS/16.7

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			Editor	Beckschäfer	
			Checked	Ch.Peck	
Stat	Alteration	Date	Name	Norm	

AEG POWER SOLUTIONS

Terminal diagram =+UPS2-A20-X6
Protect 8.33 20-400-204-400

Terminal diagram

1000007888_080 en

= | + UPS2 | & EMA

A3

CAE EPLAN Electric P8

Terminal diagram

terminal
=+UPS2-E1-X1

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U		-E1-X1	U			+UPS2&EFS/1.2
						-Q1	2			
				U		-E1-X1	U			+UPS2&EFS/1.2
				V		-E1-X1	V			+UPS2&EFS/1.2
						-Q1	4			
				V		-E1-X1	V			+UPS2&EFS/1.2
				W		-E1-X1	W			+UPS2&EFS/1.2
						-Q1	6			
				W		-E1-X1	W			+UPS2&EFS/1.2

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		Checked	Ch.Peck		
Stat	Alteration Date Name	Norm			

Terminal diagram =+UPS2-E1-X1
Protect 8.33 20-400-204-400

Terminal diagram

1000007888_080 en

= | + UPS2 | & EMA

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CAE EPLAN Electric P8

Terminal diagram

terminal
=+UPS2-E2-X2

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				L+		-L41	1.2			+UPS2&EFS/4.3
				L+						+UPS2&EFS/4.3
				L-		-L41	2.2			+UPS2&EFS/4.2
				L-						+UPS2&EFS/4.2

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Terminal diagram =+UPS2-E2-X2
Protect 8.33 20-400-204-400

Terminal diagram

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Terminal diagram

terminal

=+UPS2-E3-X3

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U		-E3-X3	U			+UPS2&EFS/8.2
						-L11	2			
				U		-E3-X3	U			+UPS2&EFS/8.2
				V		-E3-X3	V			+UPS2&EFS/8.2
						-L12	2			
				V		-E3-X3	V			+UPS2&EFS/8.2
				W		-E3-X3	W			+UPS2&EFS/8.2
						-L13	2			
				W		-E3-X3	W			+UPS2&EFS/8.2
				N		-E3-X3	N			+UPS2&EFS/8.3
				N		-E3-X3	N			+UPS2&EFS/8.3

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Terminal diagram

terminal

=+UPS2-E4-X4

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				U		-E4-X4	U			+UPS2&EFS/8.6
						-A3-X4	1			
				U		-E4-X4	U			+UPS2&EFS/8.6
				V		-E4-X4	V			+UPS2&EFS/8.6
						-A3-X4	2			
				V		-E4-X4	V			+UPS2&EFS/8.6
				W		-E4-X4	W			+UPS2&EFS/8.6
						-A3-X4	3			
				W		-E4-X4	W			+UPS2&EFS/8.6
				N		-E4-X4	N			+UPS2&EFS/8.6
				N		-E4-X4	N			+UPS2&EFS/8.6

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				Editor	Beckschäfer					+ UPS2	
				Checked	Ch.Peck				1000007888_080 en	& EMA	A3 sheet 15 / sheets 23
Stat	Alteration	Date	Name	Norm							

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Terminal diagram

terminal
=+UPS2-F120

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		-K10	A1	1		-X120	1			+UPS2&EFS/22.7

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+UPS2-F120
Protect 8.33 20-400-204-400

Terminal diagram

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=
+ UPS2
& EMA

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CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-F121

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		-K10	A2	1		-X120	2			+UPS2&EFS/22.8

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Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+UPS2-F121
Protect 8.33 20-400-204-400

Terminal diagram

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Terminal diagram

terminal

=+UPS2-PE

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				PE						+UPS2&EFS/4.3
				PE						+UPS2&EFS/8.4
				PE						+UPS2&EFS/1.4

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Norm				1000007888_080 en	A3
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Terminal diagram

terminal

=+UPS2-X12

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1		-A92.1-X3	4			+UPS2&EFS/11.5
				2		-A92.2-X10	2			+UPS2&EFS/11.5
				3		-A92.2-X10	3			+UPS2&EFS/11.5
		-A24.1-X1	+	4	'	-A92.1-X20	2			+UPS2&EFS/11.7
		-A24.1-X1	-	5	'	-A92.1-X20	1			+UPS2&EFS/11.7
				6		-CU	N			+UPS2&EFS/14.7
				7		-A9-A16-X8	5			+UPS2&EFS/14.2
				8		-A9-A16-X8	4			+UPS2&EFS/14.2
				9	●	-A9-A16-X8	6			+UPS2&EFS/14.2
				10		-A9-A50-X8	1			+UPS2&EFS/12.3
				11		-A9-A50-X8	2			+UPS2&EFS/12.3
						-Q3	96			
				12	●	-A9-A16-X8	7			+UPS2&EFS/14.2
				15		-A9-A50-X8	3			+UPS2&EFS/12.3
						-Q3	95			

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ROSETTI MARINO
Hollandse Kust Noord (HKN) wind farm

AEG POWER SOLUTIONS

Terminal diagram =+UPS2-X12
Protect 8.33 20-400-204-400

Terminal diagram

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=
+ UPS2
& EMA

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CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-X13

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		+MBC1-X14	U	U		-F100	1:2			+UPS2&EFS/23.2
		-X14	U	U						+UPS2&EFS/23.2
		+MBC1-X14	N	N		-A85-X1	2			+UPS2&EFS/23.3
		-X14	N	N						+UPS2&EFS/23.3
				PE						+UPS2&EFS/23.3
				PE						+UPS2&EFS/23.3

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Stat Alteration	Norm	Date Name			1000007888_080 en

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CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-X14

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
		-X13	U	U		-F110	1:2			+UPS2&EFS/23.6
				U						+UPS2&EFS/23.6
		-X13	N	N		-X114	N			+UPS2&EFS/23.7
				N						+UPS2&EFS/23.7

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Terminal diagram =+UPS2-X14
Protect 8.33 20-400-204-400

Terminal diagram

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CAE EPLAN Electric P8

Terminal diagram

terminal

=+UPS2-X15

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1		-A9-A50-X8	4			+UPS2&EFS/12.6
				1		-C711				+UPS2&EFS/12.7
				2		-C712				+UPS2&EFS/12.7
		+MBC1-X15	6	2		-A9-A50-X5	5			+UPS2&EFS/12.8
		+MBC1-X15	7	3		-A9-A50-X5	6			+UPS2&EFS/12.8

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Terminal diagram

terminal
=+UPS2-X120

Cable name	Cable type	Destination mark External	Connection	Terminal	Bridge	Destination mark Internal	Connection	Cable name	Cable type	Position / Page
				1	'	-F120	1:1			+UPS2&EFS/22.7
				2	'	-F121	1:1			+UPS2&EFS/22.8

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Terminal diagram =+UPS2-X120
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Terminal diagram

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Base Load Power Hub (BLPH)

AC UPS F&G - TAG: UP-200F4
EQUIPMENTS LIST & BILL OF MATERIAL

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Position	Mat.-No.	Quantity	Description
A2-C86.1 A2-C86.2 A9-A17-C303 A9-A17-C304	40000055 old: 0015709	7	Capa 0,01µF 20% 250VAC R15 UL
A1-C85.1 A1-C85.2 A1-C85.3 A1-C85.4 A1-C85.5 A1-C85.6	40000065 old: 8000011087	7	Kond Y2 0,047µF 300VAC RM20,3 UL
A105-A105	20001913 old: 8000016184	1	261 SBS Voltage matching 3ph.
A10-K7	40000468 old: 8000032332	1	Auxiliary switch CAL4-11 f.AF09-AF96 KTA
A10-K7	40003242 old: 8000043376	1	TP-Contactor AF26-30-00-11 24-60VUC
A10-T21-T23	40000340 old: 0047690	3	Transformer through WSW 60/0,06 A
A11-C101	40007994 old: 0015558	3	CAPA 0,47µF 440VAC/600VDC GPF axial
A11-Q1	40000469 old: 8000044745	1	Disconnector XT1D160 3-pol. 160A
A11-Q1	40000471 old: 8000044747	1	Shunt opening release 24-30VUC f.XT1-XT4
A18-A18	40000227 old: 8000024183	1	Graphic-DOU 2B
A1-A80 A1-A81	20001090 old: 8000023368	2	261 Rectifier-Trigger
A1-A82 A1-A83	20001091 old: 8000025394	2	261 PCB Rectifier/SBS Snubber
A1-R100 A1-R101 A2-R100 A3-R100 A4-R100	40000389 old: 8000001495	5	Temperature Sensor 10 kOHM NTC KTA
A1-T80 A1-T81 A1-T82 A1-T83	40000166 old: 0016902	4	Current transf. WSW150 150/0,1A KTA/UL

Position	Mat.-No.	Quantity	Description
A1-V1 A1-V2 A1-V3 A1-V4 A1-V5 A1-V6 A3-V31 A3-V33 A3-V35 A4-V31 A4-V33 A4-V35	40000388 old: 8000001373	12	TT-MODULE 92 N 16 KOF UL
A20-A20	20000244 old: 8000023378	1	261 parallel adapter - P8
A24.1-A24.x A24.2-A24.x A24.3-A24.x	20000414 old: 8000057818	3	261 BLÜ-PRO 110 - 480V (Assembly)
A24.1-F9x A24.2-F9x A24.3-F9x F120 F121	40008113 old: 0014094	5	Fuse 6,3x32 F 3,15 440V
A2-A1	20000234 old: 8000021689	1	261 Trigger circuit-3ph. P8
A2-C42	40000418 old: 8000022371	3	CAPA AL 6000µF 315VDC77x105 M12 KTA
A2-R42 ETHDI-R23 ETHDI-R24 ETHDI-R25	40000363 old: 05507	6	resistor 47K 5% DC 9X38 UL KTA
A2-V11 A2-V12 A2-V13	40008776 old: 8000014872	3	TRANSISTOR IGBT 200A 600V
A3-A36 A4-A36	20001092 old: 8000028563	2	261 SBS-trigger circuit 3p NPP
A3-A37 A4-A37	20000289 old: 8000028996	2	261 SBS Snubber 3-Ph.
A6-E1	20000255 old: 8000024856	1	EMC-Filter E1 P8 3-pole 350A o. N
A6-E1-L92 L86.1	40000182 old: 0047828	5	Toroidal core 61X 40X 18 5400nH KTA/UL
A6-E2	20000204 old: 8000018882	1	EMC-Filter E2 P8 2-pol. 400A f. middelr.
A6-E3 A6-E4	20000287 old: 8000028669	2	EMC-Filter E3/E4 P8.33 4-pole 350A w/N
A80-A8x A81-A8x	20000495 old: 8104070	2	261 suppression 500V 6P UL
A80-C8x A81-C8x	40006967 old: 05318	2	CAPA 4µF850VDC HSF30x85/97 6,3x0,8 M8
A85-A85	40020098	1	Heater 100W 110-250VAC/DC 50/60Hz NPP

Position	Mat.-No.	Quantity	Description
A85-F100 H1-F110	40007171 old: 0048663	2	G-fuse link 6,3x32 M/T 6,3 A 500VAC
A85-F85	40007478 old: 0027233	1	Thermostat 10°C up to 60°C
A8-A91.1	20000243 old: 8000022841	1	261 Fan Control - P8
A8-A92.1+2	20000245 old: 8000023512	2	261 Fuseboard - P8 KTA
A8-A92.1-F1 A8-A92.1-F2 A8-A92.1-F3 A8-A92.2-F1 A8-A92.2-F2 A8-A92.2-F3 A8-A92.2-F6 A8-A92.2-F7 A8-A92.2-F8	40000167 old: 0017037	9	Fuse 6,3X32 F 5 A 500VAC
A8-A92.1-F4 A8-A92.1-F5 A8-A92.2-F4 A8-A92.2-F5	40000185 old: 0050038	4	G-fuse 6,3X32 F 4 A 440 V KTA/UL
A8-A92.1-F6	40003889 old: 8000030370	1	Fuse 6,3X32 T 8 A 500 VAC KTA
A8-A92.1-F9	40007485 old: 0027059	1	G-fuse link 6,3x32 M 2 A 500V
A8-M1-M4	40000171 old: 0028612	4	Fan 230VAC 50/60Hz W2S130-AA03-21 UL
A9-A12	20000440 old: 8000062777	1	261 Remote Signalling 2 4xPanel
A9-A16	20000239 old: 8000022378	1	261 SBS Interface P8 3-Phase
A9-A16-A1	20004879 old: 8000066264	1	261 SBS ControllerBoard STM32 V2018
A9-A17	20000240 old: 8000022441	1	261 Inverter Interface P8 3-Phase
A9-A17-A1	20004877 old: 8000066260	1	261 Inv. ControllerBoard STM32 V2018
A9-A29.1	20004850 old: 8000065585	1	261 Multi CAN-Communication 2 *4xPanel*
A9-A50	20000235 old: 8000022025	1	261 Rectifier Interface P8
A9-A50-A1	20004878 old: 8000066262	1	261 Rec. ControllerBoard STM32 V2018
C100.1 C100.2 C100.3 C100.4	40000168 old: 0018271	4	CAPA 2µF 440VAC/600VDC FAPB 40X50 M8 KTA
C4-C6	40000170 old: 0022847	3	Capa 57 µF -5..+15% 440VAC M12

Position	Mat.-No.	Quantity	Description
ETHDI-C23 ETHDI-C24 ETHDI-C25	40007583 old: 0023326	3	CAPA 32 µF -5..+10 % 525 VAC
ETHDI-L22 (S10)	40011044 old: 8000061064	1	Choke TP 4,7kVA
ETHDI-L23 ETHDI-L24 ETHDI-L25	40011043 old: 8000061063	3	922 Choke P040/550Hz/2,62mH
ETHDI-Q3	40004801 old: 8000020429	1	Circuit breaker 3-pole 25A S203 C25
ETHDI-Q3	40005215 old: 8000015407	1	Signal cont. /auxil. ABB S200 1cha. over
ExBatterySensor	40013096 old: 8000062749	1	EX d Temperature Sensor NTC10k
F1 F2 F3	20001818 old: 1000001480	3	Option UPS output fuse 40A-C2
H1-H1	40002071 old: 8000062885	1	Magnet cubicle light 100-240V 50-60Hz 4W
K10	40013233 old: 8000068651	1	Relay PSR-SCP- 24DC/ESP4/2X1/1X2
L11 L12 L13	40000856 old: 9096650	3	AC-parallelchoke 30A LV6007
L41	40010349 old: 8000022102	1	DC-choke L41 P8.31/20-216
L85.1 L85.2 L87.1 L87.2	40000176 old: 0047653	4	Toro. core 42X26X25 10000nH
Q1MCCB	40002120 old: 8000062259	1	CB XT1S160 3P 100A TMD #067434
T1	40004031 old: 8000028382	1	910 Transf. 3~ T1 P8.33/020-216-400
T11 T12 T13	40010348 old: 0047198	3	Current transformer HTA-100S
T40	40013398 old: 8000070910	1	TP-transf. T40 P8.31/040-400-216 VE
T85	40000175 old: 0047197	1	Current transducer HTA-200S
Trip Battery MCCB-C711,C712	40000213 old: 8000008820	2	CAPA AL220000µF 25VDC M12 Stud

AEG POWER SOLUTIONS	**Parts list** Bypass Trans. Cabinet 20kVA 400/400V	BY-200F4 DP-200F4	Rev. 02 Page 1 of 1

Position	Mat.-No.	Quantity	Description
A85	40020098	1	Heater 100W 110-250VAC/DC 50/60Hz NPP
F100,F110	40007024 old: 0087200	2	terminal fuse UK 6,3-HESI 6,3x32 10A
F100,F110	40007171 old: 0048663	2	G-fuse link 6,3x32 M/T 6,3 A 500VAC
F24	40000167 old: 0017037	1	Fuse 6,3X32 F 5 A 500VAC
F24	40005363 old: 8000013962	1	Terminal fuse UK 10-DREHSI 6,3x32 10A
F25	40020351	1	lightning current arrestor VPU I3 R 400V
F85	40007478 old: 0027233	1	Thermostat 10°C up to 60°C
H1	40002071 old: 8000062885	1	Magnet cubicle light 100-240V 50-60Hz 4W
K1	40005511 old: 8000011691	1	Relay PLC 230VUC 1W 6mm NR2966207
Q10	40002121 old: 8000062258	1	CB XT1S160 3P 50A TMD #067431
Q28.1,Q28.2,Q71,Q72	40002052 old: 8000063609	4	Fuse ld. sw. 3 pole size NH00 160 A KETO
Q28.1,Q28.2,Q71,Q72	40012684 old: 8000069685	12	KNIFE LINK NH00 250A NPP
Q29	40014823 old: 8000019447	1	3-P.CHANGE-OVER SWITCH NO ZERO POS. C 80
QF31...QF35	40021028	5	RCBO 1P+N 16A B 300mA 10kA DS201A
QF31...QF38	40005215 old: 8000015407	8	Signal cont. /auxil. ABB S200 1cha. over
QF36...QF38	40004921 old: 8000019136	3	Circuit breaker 2-pole 10A S202 B10
T8	40012612 old: 8000067110	1	TP-Isol.-Transf. 415/415V 20kVA ±5%

27.08.2024 **Schrewe**			